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In view of an increase in our paper ration from the beginning of November, we are now prepared to accept a limited number of new home subscribers. The arrangements for accepting all new overseas subscriptions remain unchanged

DIESEL RAILWAY TRACTION

The January issue of this RAILWAY GAZETTE *Publication, illustrating and describing developments in Diesel Railway Traction, is now ready, price* 2*s.*

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THE RAILWAY GAZETTE

33, TOTHILL STREET, WESTMINSTER, S.W.1.

Railwaymen in New Year Honours

THE New Year Honours List, issued as we were about to close for press, contains among the lists of Knights two well-known railway names. Sir William Valentine Wood, who was created a Knight Bachelor in the Coronation Honours List in May, 1937, receives the K.B.E. Sir William Wood's outstanding services to the railways, and, indeed, to transport generally, are well known, and in recent years he has taken his full share of the strain arising from events now approaching their climax. Since the middle of 1941, he has been President of the L.M.S.R., of which railway he had been a Vice-President for ten years. Mr. R. J. M. Inglis, who becomes a Knight Bachelor, retired from the L.N.E.R. last year. He had been Divisional General Manager (Scottish Area) since 1941, and since some time before his retirement he has been carrying out important work as Chief of the Transport Division in the British Zone of Germany. His organising ability, initiative, and energy, and his wide experience in civil engineering affairs, have been brought into play with considerable success. Before going to Germany, he spent a considerable time, during the recent war, on important work for the Government outside this country.

* * * *

British Transport in 1947

The year which has just closed has been marked by great changes in the industrial life of the nation. The first of a number of socialist experiments in State ownership have been passed by Parliament, and the Bank of England, the coalmining industry, Cable & Wireless, and civil aviation have passed from private ownership to State control. The initial steps have been taken to bring about the greatest and most complex of the Government's nationalisation schemes—that relating to the internal transport of the country. The second reading of the Transport Bill was passed through the House of Commons by the end of the year, and there seems no doubt that the Government is determined to push through the other stages of the measure as speedily as possible, notwithstanding the widespread opposition that has been aroused. The unsettlement which this measure is causing throughout trade and industry will not assist in promoting national recovery, or help to bring about the increasing prosperity which we wish all our readers, many of whom we also thank for the seasonal greetings, diaries, calendars, etc., which they have sent us.

* * * *

Transport & Industry Committee Opposed to Bill

The recently formed Liaison Committee of Transport & Industry, a list of members of which was given in our December 13 issue, and which includes not only the main transport services, but also the principal representative bodies of transport users, has issued a statement calling for a public inquiry into the Transport Bill. It is pointed out that this would provide an immediate opportunity for close examination of the scheme for co-ordination of road and rail transport submitted to the Government in July last. The Committee is convinced that the Government's proposals for nationalisation materially would hamper the productive powers and distributive services of the trade and industry of the country. It argues that the present is not the time to attempt to alter the whole structure of the transport system, because great administrative and financial dislocation would occur; this would impede for many years the restoration of transport services. The trading organisations which are members of the Liaison Committee are gravely concerned at the inadequacy of the safeguards contained in the Bill as to the interests of traders in relation to such fundamental matters as rates and charges by rail and road, and the freedom of choice of alternative forms of transport.

* * * *

Engineering Advisory Council

The Minister of Supply has announced his decision to set up an Engineering Advisory Council to provide the Government with a means of consultation with employers and workers in the industry on matters of general concern in the engineering field. The industry for this purpose will comprise mechanical, electrical, and radio engineering, but not shipbuilding or the

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iron and steel industry. There will be an equal number (about 10 a side) of trade union and employer members, and Mr. John Wilmot, Minister of Supply, will be Chairman. Questions relating to labour and conditions of work will not come before the Council, as these are normally the function of collective bargaining. Notwithstanding the fact that there are specialised councils for the motor, machine tool, and gauge and tool industries, general questions affecting these sections are to come within the engineering council's purview, and it will also be competent to take up questions of raw material supplies and exports which have a bearing on policy in relation to engineering. To facilitate its work, the Council will have the right to demand and receive information to be supplied by the staff of the Ministry of Supply. The Federation of British Industries has been asked to convene representative employers for the purpose of negotiating the setting up of the Council, and it is expected that the Council will commence work soon.

* * * *

The Road and Rail Rates Problem

Mr. David Blee, Chief Goods Manager, Great Western Railway, in the course of a paper entitled "Possible Trends of the Road-Rail Rates Problem," read recently before the Railway Students' Association, of which he is a Vice-President, put forward several interesting suggestions as to future developments. After a brief survey of the present position and the factors which have led to it, he proceeded to outline various possible arrangements, and dealt, first, with the conditions which might arise under a common classification of commodities for both rail and road transport, with a possible standardised system of distancing and common terms and conditions of carriage. Another approach, Mr. Blee continued, might lie in a direction in which a limited experiment had already been conducted: that was, by a series of agreed pre-established mileage divisions of function on a broad commodity basis; and yet another approach in the possibility of railways performing the trunk haulage of commodities on behalf of road hauliers. An abstract of Mr. Blee's paper appears on another page.

* * * *

Overseas Railway Traffics

The Buenos Ayres Great Southern and Buenos Ayres & Pacific again showed decreases in the week ended December 14, but the Buenos Ayres Western recorded a gain of ps. 70,000, compared with a loss of ps. 104,000 in the preceding seven days. Central Argentine traffics, which alone of the four main British-owned Argentine railways showed a small gain in the 23rd week, were ps. 163,275 higher in the week ended December 14. Decreases have continued on the Central Uruguay Railway, and at December 14 the aggregate from July 1 had fallen behind the previous year, the total of £877,704 representing a decline of £1,608. Estimated gross receipts of the Midland Uruguay Railway for November were £14,510, or £5,278 lower than in the preceding year. Some results are compared in the table below:—

	No. of week	Weekly traffics	Inc. or dec.	Aggregate traffics	Inc. or dec.
Buenos Ayres & Pacific* ...	24	2,411	− 96	53,840	+ 3,781
Buenos Ayres Great Southern*	24	3,782	− 138	79,132	+ 3,762
Buenos Ayres Western* ...	24	1,465	+ 70	29,390	+ 1,341
Central Argentine*	24	3,255	+ 163	75,278	+ 2,479
		£	£	£	£
Canadian Pacific	51	1,485,000	+50,000	71,218,000	−5,900,000

* Traffic returns in thousands of pesos

Canadian National traffics for November showed an increase of £705,500, an improvement of £481,000 on the October result, but aggregate traffics for the first eleven months of 1946 were £8,370,500 behind the 1945 figure.

* * * *

Coal Situation Compels U.S.A. Dieselisation

Constant unrest and crippling strikes in the American coalfields are having a marked effect on the attitude of American railway officers to the use of oil instead of coal as motive power. For example, on the Union Pacific Railroad, with ready access to the Californian oilfields, all main-line passenger trains, with two minor exceptions, are worked now either by oil-burning steam locomotives or diesel-electric power; at the time of the last coal strike, 45 of the company's powerful 4-8-4 steam locomotives were converted to burn oil. On the opposite side of the country, and the more remarkable in that the railway concerned is adjacent to the bituminous coalfields, the Central Railroad of New Jersey has declared its intention "to give the railroad complete independence from the use of bituminous coal" as rapidly as possible. A beginning is being made with the suburban services round New York; the C.N.J. is a pioneer in the use of such high-powered diesels as 2,000 b.h.p. for suburban assignments. In accepting from the builders the first of the diesels on order, the Chief Executive Officer of the C.N.J. remarked: "The Jersey Central Lines and their patrons cannot and will not be placed at the mercy of the whims of any man who decides to call a strike in the soft coal mines when it suits his fancy. This condition has prevailed far too frequently in the past, but it is going to end so far as the Jersey Central and its operations are concerned."

* * * *

Pullman Car Company Results

In some remarks accompanying the report of the Pullman Car Co. Ltd. for the year ended September 30, 1946, the Chairman and Managing Director, Mr. Stanley J. Adams, points out that the accounts shown are the first to reflect normal trading since 1939. Gross earnings, including compensation receivable, have increased from £71,780 to £277,078, and after deduction of maintenance and working expenses, a net profit is shown of £506, compared with a loss of £6,653 for 1944-45. The outstanding feature of the accounts is the figure of £103,128 which has been expended in renovating the company's rolling stock, and this has been charged entirely to profit and loss account. A revaluation of the company's cars has been made by Sir William Stanier, formerly Chief Mechanical Engineer, L.M.S.R., whose assessment is £836,231. The company has been advised by Sir William Stanier that a reasonable figure for maintenance in normal times is £30,000 a year, and it is proposed to bring in to credit of the reserve, £11,845 for deferred maintenance. At the present time, the company is operating upwards of 100 cars, including three all-Pullman trains, in addition to a number of restaurant and pantry cars running on the Southern Railway system. During the year of working covered by the report, Mr. F. D. M. Harding was appointed General Manager of the company, succeeding Mr. G. H. Griffith.

* * * *

Transport in Poland

Mr. Norman Neville, O.B.E., gave a talk recently on his impressions while attending the Congress of the General Technical Federation at Katowice, Poland, as a delegate of the British Engineers' Association. He referred to the great difficulties of the present situation, which Poland was facing resolutely, particularly in respect of transport facilities. During the fighting which devastated the country, some 40 per cent. of the railway tracks were destroyed, 70 per cent. of the bridges were wrecked, and 90 per cent. of the passenger rolling stock disappeared, as well as practically all road lorries. Nevertheless, most of the long-distance trains had been reinstated already, and many locomotives recovered; the Poles, indeed, have shown themselves fine railway engineers. Lorries have been more than replaced through the agency of U.N.R.R.A., to whose good work Mr. Neville paid a handsome tribute, as well as to the excellence of our consular service in Poland. Other difficulties mentioned related to the migrations of population, the sore need for capital goods for the mechanisation of agriculture, and the re-equipment of the Silesian coalfields. Mr. Neville was convinced that a large trade could be developed with Poland by the exchange of capital goods for coal and agricultural products, but transport still constitutes a bottleneck.

* * * *

An Abandoned British Electrification

The Newport-Shildon line of the former North Eastern Railway was electrified in 1915 experimentally on the now standard 1,500-volt d.c. system. The unique feature of the work was that it was carried out to improve the handling of dense freight traffic, and the few passenger trains remained steam hauled. With the decline of heavy industry and of the coal export trade after the 1914 war, many of the collieries supplying this line became uneconomical to work and were closed in the general

depression. Thus, the decreased demand of the Middlesbrough area caused the former heavy mineral traffic to shrink until it was no longer profitable to be worked by electricity. Nevertheless, the equipment was still there to be used, so that no change was made until 1935, when considerable expense would have been necessary to renew the overhead conductors. As the traffic no longer justified this expenditure, the line reverted to steam traction, and the electrical equipment was removed. This interesting electrification forms the subject of a short article elsewhere in this issue. The locomotives are to be reconstructed for use on the Sheffield-Manchester main line, the electrification of which, it will be remembered, was delayed by the recent war.

* * * *

The L.N.E.R. Newcastle Quayside Branch

To the purist, the title of our article on the former electrified Shildon line might appear to have overlooked the goods branch in Newcastle leading to the quayside yard. Interesting as this is, however, we felt that it was not a full-sized railway in a sense to invalidate our title, but rather a goods line off-shoot of the Tyneside passenger electrification of 1904. This quayside branch for goods traffic was opened in 1870, on a gradient of 1 in 27, to lose the height between the main railways in Newcastle and the riverside districts. To achieve this, it also adopted a horse-shoe layout with sharp curves, and is largely in tunnel. Electrification was decided upon when the Newcastle suburban lines were being converted, and electric traction began in June, 1905, but using overhead wires, excepting through tunnels of insufficient clearance, where third rail was adopted. The current is 630 volts d.c., and the two locomotives supplied by the British Thomson-Houston Company (without dead-man handle, and staffed by two men) are still in use. The branch deals with traffic to and from the quay which is owned by the Newcastle Corporation, and warehouses adjoining it. During the war, moreover, it handled very heavy traffics, with the record of no less than 447 wagons in one working day.

* * * *

Modern Marshalling Yards

Complete mechanisation, including power-operated rail-brakes and automatic point setting, is an attractive proposition for a hump marshalling yard. Such an installation is expensive, however, not merely in the capital cost of the specialised electrical and mechanical equipment, but even more so in the civil engineering work involved in the grading and general layout of the yard. The question naturally arises as to what volume of traffic is sufficient to justify complete mechanisation. It is not, however, a question that admits of a clear-cut answer, as traffic and physical conditions vary so greatly from yard to yard. In an article published elsewhere in this issue, Mr. J. C. Kubale, Chief Engineer of Metropolitan-Vickers-G.R.S. Limited, discusses some of the factors which have to be considered in coming to a decision on the equipment of a marshalling yard. Mr. Kubale estimates that, under British conditions, a density of traffic exceeding 2,000 wagons a day must be attained before a fully mechanised yard will show any saving in labour costs over a non-mechanised yard in which the operation of the points is by hand and the wagon brakes are applied by shunters running alongside. The advantages cannot be measured entirely by the savings in operating costs effected; the benefits arising from a well-designed and efficiently-worked yard are reflected in the smooth operation of freight traffic over wide areas centred on such a yard.

* * * *

New L.M.S.R. Locomotives

The first locomotives of a new type of 2-6-0 tender and 2-6-2 tank engine have been completed recently at the Crewe works of the L.M.S.R., to the designs of Mr. H. G. Ivatt, the Chief Mechanical Engineer. The new locomotives are intended to replace older engines which hitherto have been used on cross-country, branch line, and light main-line working. They are essentially general purpose engines, suitable for both freight and passenger services, and thus represent a continuation of the policy of designing standard types able to deal with a wide range of traffic. Axle loads have been kept to a very low figure, so that the new locomotives should be able to run on any part of the system, including lightly-laid branch lines. The two new types are identical, apart from the fact that one is a tank and the other a tender engine, with the resulting advantage that renewable parts are the same for each type of locomotive. Although the general design is of a simple and straightforward nature, modern developments are incorporated, such as rocking grate and self-cleaning smokebox. Another interesting feature is the improved design of pony truck. It is satisfactory to note, in view of the fact that a number of picturesque pre-grouping types will be displaced, that the appearance of the new engines is very pleasing.

* * * *

Transport Bill Debate

ALTHOUGH, as was anticipated, the three days' debate in the House of Commons resulted in the Transport Bill passing its second reading, it is clear that, when the Bill is considered in the Committee stage, it will require to be amended in many important respects if it is to become a workable measure.

As will be seen from our Parliamentary summary, the Government supporters spoke mostly in wide generalities without any regard to the more important point as to the means by which the desired objects of co-ordination and integration are to be obtained.

For example, the Minister of Transport stated, as part justification for the Bill, that 45 per cent. of the world's rail transport was already publicly owned or State owned—a somewhat curious foundation on which to build the far-reaching proposals now propounded, having regard to the financial and operating results of a large part of these State-owned railway systems.

He also referred to the London Passenger Transport Board as the best example of the desirability of unification, but again omitted to refer to the financial results of its operation.

He then stated that the strategic value of the railways had been clearly demonstrated to the whole nation during two wars, and said that the Government could not permit under any circumstances any form of competition to undermine the stability and efficiency of the railway system. For this reason, the Government proposed to arrange that "resources will be pooled for the purpose of seeing they are safeguarded"—a delightfully vague phrase which might, or might not, mean a great deal so far as the future of road transport is concerned.

As to rates and charges, he claimed that he had endeavoured to get a clear, simplified machinery for dealing with this important matter, and suggested that one of the most beneficial results of the Bill would be a simplification of the "jungle of charges which now prevails." He was not in a position, however, to outline the general principles on which rates and charges would be based in future, as this was a matter for the Commission.

Although he referred with some scorn to the millions of railway exceptional rates now in force, we suggest that the Commission will find their cancellation a most difficult task; in fact, the Minister of Transport admitted that the complexities involved in this connection needed the most careful inquiry by the most competent people.

Finally, he complained that no alternative to the Bill had been suggested, a somewhat naïve remark seeing that the main purpose of the debate was to enable the Government to demonstrate how its proposals were likely to achieve the desired object—on which point, however, no information was provided.

The Chancellor of the Exchequer then spoke in justification of the decision of the Government to acquire railway stockholdings on the basis of Stock Exchange prices. He claimed that revenue was now dropping fast on the railways, and that if any Government "allowed the full blast of road competition to blow upon the railway system which had been sheltered for many years by legislative and administrative action, they would be totally bankrupt within a few years."

He contended that all pre-war experience showed that before long the railways "would have been on the rocks," and sought to justify the proposed terms for their acquisition by

such unfair phrases as "this railway system is a very poor bag of physical assets"; "the permanent way is badly worn"; "the rolling stock is in a state of great dilapidation," and "the railway stations and their equipment are a disgrace to the country." His attack was not only unfair, but entirely unjustified by the facts, as we explain in another editorial in this issue.

Finally, Mr. Morrison wound up the debate for the Government, and admitted that British railways, management, and men, did a great job for the country during the war. He also agreed that a good many of the present railway difficulties are due to war strain and the inevitable difficulties of replacement and repairs, but he maintained that a good deal of the British railway system was not creditable before the war, specifically mentioning certain sections of the L.N.E.R., as did the Chancellor of the Exchequer.

Mr. Morrison contended that, under the Government's proposals, the British Transport Commission would be able to concentrate on "sheer efficiency" from the start, and, because of the abundance of cheap capital, would be able to undertake a bold and considered programme of transport development without undue bureaucracy or over-centralisation, which would have been impossible under private enterprise.

* * * *

Chancellor's Criticism of the Railways

RAILWAYMEN throughout the country, both management and staff, cannot but regret the disparaging remarks made about the British railways by Mr. Hugh Dalton, the Chancellor of the Exchequer, when he attempted to justify the Government's proposals for the acquisition of railway stockholdings during the second reading of the Transport Bill on December 17. The Chancellor then said that "this railway system of ours is a very poor bag of assets. The permanent way is badly worn. The rolling stock is in a state of great dilapidation. The railways are a disgrace to the country. The railway stations and their equipment are a disgrace to the country."

These statements so pointedly ignore the reasons for the companies' inability to restore their pre-war standards of service, that they are very strongly resented by many railwaymen as being entirely unjustified and a complete distortion of the facts. Mr. Anthony Eden on the next day attempted to put the Chancellor's statements in their proper perspective, but we take this opportunity of mentioning some of the important factors which the Chancellor deliberately ignored in the debate.

It can be claimed without fear of contradiction that, at the outbreak of war, the British railways were recognised as the finest in the world. This high reputation has been achieved because over a period of years the railway boards placed service before dividends and spent their income freely on improvements.

It was the efficiency of their pre-war organisation and the high standard at which their lines and rolling stock had been maintained which enabled the railways to meet the unprecedented demands arising from the war. The railways carried out these works of improvement despite many years of trade depression—when their losses were accentuated by road competition and their inability successfully to meet such competition was because of restrictions placed on them by Parliament.

Had not the railways been so efficient when war broke out, the results of the war might easily have been different. During the war, the railways were asked and gladly assented to release many skilled men from their workshops to assist in shipyards and Government factories; they undertook millions of pounds worth of work on munitions, and time and time again rendered invaluable assistance to private firms having Government contracts. Small wonder, then, that their own maintenance work had to be neglected, quite apart from the fact that the very large number of men who were released to serve in the Forces and the diversion of essential materials to war contracts made this inevitable.

Despite their inability to keep pace with their essential maintenance work, the railways kept going under unparalleled conditions. The abnormal wear and tear to which railway rolling stock, equipment, and permanent way was subjected was most severe during that period, but thanks to the splendid condition of the lines generally, the railways fulfilled every demand during the war.

This "poor bag of assets" as the Chancellor so contemptuously referred to the British railways, actually earned a profit for the Government of some £221 millions during the period of control up to December, 1945, in excess of the fixed sums payable to them under the Railway Control Agreement. This was done despite the fact that the Government prevented them from increasing their charges to a level commensurate with their costs.

The question might well be asked—what is the Government doing to assist the companies to restore their undertakings to their pre-war condition? At December 31, 1945, about £148 millions had been set aside out of the control account to meet arrears of maintenance which had accumulated during the war period. As soon as the war ended, the companies commenced their task of overtaking these arrears within, as they hoped, a period of five years at the most.

But they have been frustrated at every step, and during the present year, despite the urgent necessity for improving the condition of their rolling stock and track, the Government has been unable to let them have sufficient materials to carry out even their normal maintenance work. This means that instead of 1946 seeing a good start made with the renovation work, their arrears of work are now greater than they were twelve months ago.

Their prospects for 1947 are even worse. They have been informed that they cannot expect to receive more than half the sleepers required for their normal maintenance work; neither can their requirements be met for steel rails, rail chairs, timber, or other materials for the construction and repair of coaches and wagons. In these circumstances, conditions on the railways inevitably will deteriorate further.

Continual requests have been made to the Departments concerned for additional labour and materials, but they have not been forthcoming. As to the references to the L.N.E.R., Sir Ronald Matthews has since pointed out that, while the average age of its engines is 32·41 years, compared with 27·70 at the outbreak of war, wagons average only 17·73 years and passenger carriages 23·7 years. So far as the passenger carriages on the Liverpool Street suburban services are concerned, orders were placed before the war for new electric trains, and, but for the war, a substantial proportion of these routes would have been electrified.

This, however, does not necessarily make the railways a "poor bag of assets," for in addition to the physical assets of the railways, which could not be replaced for a very much higher sum than their nominal capital value, their assets include £148 millions in the maintenance trust funds; some £80 millions in cash and Government securities, 50 per cent. of the shares in most of the bus companies, and all the shares in the largest road haulage company in the country.

The bitter and unjustified remarks of the Chancellor regarding the British railways will not readily be forgotten, and also will be regarded as most unfair by the many thousands of people who, after a night of terror from the skies, were restored to sanity by the steady clank-clank of a local freight train as it nosed its way into or out of the metropolis as the dawn was breaking.

* * * *

Transport Bill and Railway Staff

THE *Railway Review* in a recent issue accused the railway companies of misrepresenting the facts as to the provisions of the Transport Bill so far as they affect the railway staff. It quarrels, in particular, with the statements that the protection provided for staff who may be prejudiced by the transfer is not as adequate as that provided in the Railways Act, 1921, and the London Passenger Transport Act, 1933, and that the staff are not safeguarded from alteration of existing conditions of service and the withdrawal of privileges now enjoyed. What are the facts?

As explained fully in our issue of December 13, under the two Acts mentioned it is specifically laid down that employees transferred shall not, by reason of the transfer, be in a worse position than they were under their original employment, and any employees who consider their position has been worsened have the right to receive compensation awarded by an inde-

pendent arbitration, with the right of appeal to the High Court.

Under the Bill, however, an employee may be required to carry out different services from those he performed for his old company. The Bill provides that he may be called on to perform " reasonably comparable " services, and the Commission is the sole judge of this criterion.

Further, if loss of employment, or of salary, or wages results, compensation for such loss will be paid by the Commission only in such cases and to such extent as the Minister may prescribe by regulations. This is far different from the 1921 Act protection, and, moreover, the Bill provides that the Minister may make different regulations for different classes of employees, and against his decision there can be no appeal. Any employee who suffers a reduction in wages as a result of transfer to the Commission is, therefore, at the mercy of the Minister, not only as to what compensation he shall receive, but also as to whether he shall receive any compensation at all.

In addition, the Bill authorises the Minister to prescribe compensation only for actual loss of employment, wages, or personal rights, and not for loss of prospects or of customary rights and privileges.

We observe that the *Railway Review* does not comment on the question of the continuance of the many rights and privileges which have been enjoyed by railwaymen for many years, but which cannot be legally enforced. The Bill, however, preserves only customary obligations, and not customary practices as was the case in the 1921 and 1933 Acts.

So far as persons are concerned, there is no obligation on the Minister to introduce pension schemes for new entrants. No indication is given in the Bill or by the Minister as to whether railway staff employed on such services, docks, and steamboats, etc., will be transferred to the control of the executive bodies other than the Railway Executive, and, if so, whether they will then cease to be railwaymen and have to accept some other machinery of negotiation to settle their wages and conditions of service.

If the railway unions are content with the many uncertainties affecting railway staff to which the Bill gives rise, we can only suggest they are very easily satisfied.

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Argentina Buys French-Owned Railways

AS foreshadowed in *The Railway Gazette* of October 4, 1946, the agreement for the repatriation of the British-owned Argentine railways has been followed by a similar transaction involving the sale of the three French-owned lines to the Argentine Government. Two of the companies are metre gauge and one is broad gauge, and their chief characteristics are as follows:—

	Rosario á Puerto Belgrano	Cia. Gen. de FF. CC. de la Prov. de. B.A.	Cia. de FF. CC. de Santa Fé
Gauge	5 ft. 6 in.	1 metre	1 metre
Capital in pesos	78,793,417	114,542,096	156,321,030
Gross receipts	6,139,860	20,138,948	29,049,733
Expenses	6,455,945	19,551,837	23,623,850
Net receipts ... (loss)	316,085	587,111	5,425,883
Per cent. on capital	—	0·51	3·47
Mileage of line	513	788	1,344
No. of locomotives	50	112	157
,, carriages	34	89	147
,, brake vans	49	91	141
,, wagons	1,128	3,031	5,495
Staff employed, all grades	1,442	3,513	4,631
Average pay per month	£13 5s. 0d.	£13 13s. 4d.	£13 10s. 0d.
No. of passengers	58,530	2,280,811	400,749
Goods and livestock, tons	757,606	1,954,616	4,131,754
Parcels and luggage, tons	1,400	40,443	7,302
Fuel consumed, tons :			
Coal	494	8,748	3,188
Firewood	47,353	152,129	304,855
Petroleum	—	384	4

The total agreed price for the three lines is $182,796,174, subject to ratification by the stockholders, and is approximately 52 per cent. of the capital invested. Information is not available as to the basis on which the price was fixed. The broad gauge Rosario á Puerto Belgrano line was worked at a loss during the last financial year for which figures have been published, that is, 1944-45; in the same period, the metre gauge Cia. General de FF.CC. de la Provincia de Buenos Aires earned a modest 0·51 per cent. on the capital; but the Cia. de FF.CC. en la Provincia de Santa Fé fared rather better, with net earnings equal to 3·47 per cent.

Sir Ronald Matthews Answers the Minister of Transport

ON December 23, Sir Ronald Matthews, Chairman of the London & North Eastern Railway Company, issued the following statement on the speech of Mr. Alfred Barnes, when, as Minister of Transport, he introduced the second reading of the Transport Bill:—

" It is a matter requiring immediate correction when a Minister of the Crown uses inaccurate statistics which have the effect of disparaging the value of a business which his Government is proposing to acquire compulsorily at a price which many people consider grossly inadequate. In his opening speech in the Transport Bill debate, Mr. Barnes, referring to the London & North Eastern Railway, said: ' Its locomotives, on an average, are over 32 years old. That applies also to wagons and other elements in the rolling stock, and at a time when it is vital that transport should render an efficient service to British industry we are having to impose widespread restrictions on all kinds of commercial traffic. . . .'

" Now, whilst it is true that on December 31, 1945, the average age of L.N.E.R. steam locomotives was 32.41 years, it is emphatically *not* the case that this applies to ' wagons and other elements in the rolling stock.' Wagons averaged only 17.73 years old, passenger carriages averaged 23.70 years old, and non-passenger-carrying coaching vehicles (brake vans, horse boxes, etc.) 17.82 years.

" *Actually, the L.N.E.R. fleets of both wagons and non-passenger-carrying coaching vehicles were the youngest of those owned by the three great freight-carrying railways.*

" As regards the old-fashioned carriages on the Liverpool Street suburban services, which the Lord President of the Council criticised in his speech towards the conclusion of the debate, it should be remembered that, but for the war, a substantial proportion of the routes served would have been electrified, and orders in fact had been placed in 1939 with the manufacturers for the construction of new electric trains. It is no fault of the L.N.E.R. that the old stock still has to be used six years after it was due to be scrapped.

" The average age of L.N.E.R. steam locomotives at the end of 1939 was only 27.70 years. The rise over the war period to 32.41 years was due mainly to the necessary diversion of our locomotive shops to war work, such as manufacturing tank, aircraft, and artillery components, rocket guns, and many other items, including no less than 1½ million shell cases.

" Incidentally, during the past year the L.N.E.R. locomotive stock has benefited from the purchase of 75 shunting locomotives and 200 ' austerity ' heavy freight locomotives from the Ministry of Supply, by the delivery of about 70 mixed-traffic locomotives from outside builders, and by new construction in our own locomotive shops.

" In his speech, Mr. Barnes, referring to the effects of industrial depression and competition from road transport between the wars, added that ' the L.N.E.R. suffered probably more than the others, with the result that the necessary capital was not expended, as it should have been, on keeping their capital equipment up to date.'

" Even an elementary acquaintance with business practice or accountancy will demonstrate that it would be very wrong indeed to raise and spend capital merely on keeping equipment up to date. This is a charge on revenue, and in the case of the railways it is met through renewal or depreciation funds. Any business which raises large amounts of capital merely to effect renewals or depreciation will soon find itself in ' Queer Street '; and if Mr. Barnes's new Transport Commission is going to follow this method of finance, the outlook is indeed an alarming one! "

THE MEAT ROAD TRANSPORT POOL.—Arrangements have been completed for the acquisition by the road haulage industry, as from January 1, of the Meat Transport Section of the Ministry of Transport Road Haulage Organisation. This was agreed some time ago, when the vehicle pool of the Road Haulage Association replaced the Ministry of Transport Road Haulage Organisation so far as general traffic was concerned. A new company is being formed under the name of Meat Transport Organisation Limited (or similar title) to enter into an agreement with the Government for the carriage of meat and livestock.

LETTERS TO THE EDITOR

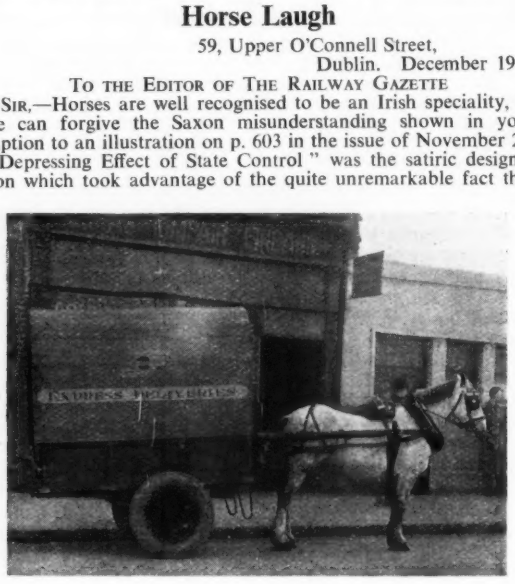
(The Editor is not responsible for the opinions of correspondents)

Horse Laugh

59, Upper O'Connell Street,
Dublin. December 19

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—Horses are well recognised to be an Irish speciality, so we can forgive the Saxon misunderstanding shown in your caption to an illustration on p. 603 in the issue of November 29. "Depressing Effect of State Control" was the satiric designation which took advantage of the quite unremarkable fact that



one of our city parcels service horses was standing with his head well down. Allow me to assure you that every horse hangs his head at times. Even the Derby winner does not maintain perpetually the statuesque pose in which he is usually portrayed by the sporting papers.

By the way, your inferential comparison of the measures taken here for unification of transport systems with those now proposed to be taken in Britain, shows a misunderstanding which is rather less than equine. Transport has not been nationalised here. The difference between the two legislative schemes is fundamental. Perhaps in the interests of equity you would care to reproduce the attached photograph.

Yours faithfully,
L. A. LUKE,
Public Relations Department

Wooden or Metal Sleepers

The Haye, Sherborne St. John,
Basingstoke. December 20

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In the opening paragraph of an article on "Wooden Sleeper Lengths," appearing in your issue of November 22, the following somewhat sweeping statements occur: "The wooden sleeper is, and for many years is likely to remain, the standard and by far the most widely used in practically every country"; and: "It is in almost every respect still the most satisfactory type, with which no other can compare for resilience and cushioning of the track, and in numerous other ways."

The article then deals with the claim of Mr. Jeffords, Chief Engineer of the Atlantic Coast Line System, that a 9-ft. wooden sleeper provides numerous advantages, among which are included smoother riding and less risk of centre binding. Mr. Jeffords is speaking of American conditions which no doubt have their own special problems, but even if his conclusions are justified for his own system, it seems hardly logical to apply them to conditions elsewhere without conclusive practical evidence to support them. Nor do Mr. Jeffords' contentions, and the fact that wooden sleepers are practically universal in America, permit the assertions in the opening paragraph to go without qualification.

Local availability and low first cost play an important part in the provision of timber sleepers, but it is noteworthy that in two important countries with enormous mileage, Africa and India, the use of metal sleepers has attained extensive proportions. In the case of India, at least two-thirds of the sleepers now being installed are metal and not wooden. Recent trials in this country have shown definitely that cast-iron plate sleepers possess qualities and advantages which are not merely confined to long life and availability as an indigenous product, but extend to the provision of a smooth-running and well-cushioned road in no way inferior to that obtained with wooden sleepers.

British railway practice is to pack 300 sq. in. at each rail seat, and this area of support has been shown by experience to be sufficient to produce a first class road. The cast-iron plate sleepers referred to provide the same packed area, but without any risk whatever of centre binding. They are even quieter running than wood, and from practical evidence are easier to lay and cheaper to maintain. Engineers with experience of these sleepers cannot fail to draw the conclusion that the wooden-sleeper tradition is likely to be broken by their introduction, and that whatever justification there may be for the claim of superiority of the wooden over various types of reinforced concrete sleeper, no such claim can be substantiated with regard to cast-iron sleepers under identical conditions.

Yours faithfully,
J. M. D. WRENCH

British and Continental Railways Compared

London. December 20

TO THE EDITOR OF THE RAILWAY GAZETTE

SIR,—In Mr. Dalton's speech on the Nationalisation of Transport Bill, he compared the British railways adversely with those of the Continent and the U.S.A. and Canada, mentioning sleeping, feeding, and terminal facilities. The British railways have specialised on the job of providing trains rather than stations, refreshments, and hotels, and Mr. Dalton may not know that the Grand Central Station in New York, with about 30 platforms, handles the same number of trains a day as Charing Cross, which has six platforms.

Is not this the reason why the countries referred to by Mr. Dalton have to provide palatial stations, with ample food, while people are waiting for the comparatively sparse train service? The Englishman going abroad is apt to compare the international expresses by which he travels with his own country's local services. He does not compare like with like. Had Mr. Dalton looked out of the windows of the luxurious trans-European expresses, he would have observed branch line or local suburban rolling stock in any of the Continental countries he mentioned to be infinitely cruder and more antiquated than anything to be found in Great Britain.

It is wiser to listen to those who have lived for some time in both or all the countries they compare. What know they of railways, who only the "Golden Arrow" know?

Yours faithfully,
CALLIOPE

Publications Received

Railways and the State: The Problem of Nationalisation. By Ernest Short. London, 1946: Hollis & Carter Limited, 25, Ashley Place, S.W.1. 9 in. × 6 in. 84 pp. Price 2s. 6d.—Discussions among the general public on the nationalisation of transport tend to be characterised more often by exaltation of sentiment than accuracy of information, and it is doubtful how many of those who support the Government's policy in this country do so after a study of private and State-owned railways in operation elsewhere. For those who are moved to make such a study now, this book by Mr. Ernest Short, who is General Secretary of the British Railway Stockholders Union, is a convenient introduction to the subject. The first half of the book deals with transport in this country, discussing its present organisation and problems, and elucidating many matters relating to rates, finance, and labour conditions in an historical survey, leading up to the conclusion that: "If nationalised railways mean a cheaper and more efficient service, well and good. If not, Parliament, and the electorate which gave it power, must think again." In the second part of the book Mr. Short deals with the various forms which transport nationalisation has taken overseas, the results achieved, and the treatment of investors when company-owned systems were taken over. We hope to deal with Mr. Short's book more fully in an editorial article in a forthcoming issue.

The Public and Ourselves.—A booklet has been issued by the Chief Commercial Manager of the L.M.S.R. giving guidance on the cultivation of good relations with the public by all concerned with the provision and sale of transport. Every railwayman, it is pointed out, is a public relations man, and can mould public opinion by his helpfulness and tact. The booklet then discusses the means of creating a good impression in telephone conversations, correspondence, and when dealing with complaints. Emphasis is laid on clarity of expression and avoidance of conventional phraseology in letters. Observance of the suggestions made, which are simple to follow, but often a source of irritation when neglected, should help to maintain a favourable public opinion.

The Scrap Heap

Dilapidation

On the question of run-down capital it is easy for the Chancellor to be sarcastic, as he was at the expense of the railways. If British industry is somewhat battered and outworn, it is largely because the country fought two major wars in a generation, and was in both from the first day to the last. "Very poor shape . . .," "A very poor bag of physical assets . . .," "A state of great dilapidation . . .," "A disgrace to the country . . .," says the Chancellor. This is something of the impression that a financial scribe gets when he leaves a well-appointed newspaper office for a call at the Treasury, where he is taken up in an antiquated lift and shown into a waiting-room calculated to induce the preliminary depression proper to a homily on cheap money manipulations. As well argue the current case for conscription from the present state of the citizen's underwear and stair carpets. If seediness is the criterion, the contrast between the appointments of the average bank and the average post-office suggests that the Post Office should be handed over to private enterprise.—*G. L. Schwartz in "The Sunday Times."*

* * *

100 YEARS AGO

From THE RAILWAY TIMES, *January* 2, 1847

MARYPORT & CARLISLE RAILWAY.—The Directors are ready to receive Tenders for the supply of

80 Goods Trucks,
30 Ditto, with sides, ditto,
30 Flat, or Stone Trucks,
20 Cattle Trucks,
6 Horse Boxes,
4 Carriage Trucks.

Tenders addressed to the Secretary, with full particulars, on or before the 12th of January.

G. H. BARNES, Secretary.

Maryport, December 22, 1846.

COCKERMOUTH and WORKINGTON RAILWAY.—NOTICE.—The Directors are ready to receive Tenders for the supply of the undermentioned Coal Waggons, &c., viz.:—

100 Coal Waggons.
15 Merchandise ditto.
3 Carriage Trucks.
3 Horse Boxes.
10 Timber Trucks.

Tenders, with Specifications, may be sent in to the Secretary on or before the 13th January, 1847. Further particulars may be had on application.

By order,

HENRY JACOB, Secretary.

Company's Offices, Cockermouth, December 30, 1846.

Organisation

In the past two months I have travelled maybe 10,000 miles, from the North Sea to the Pacific and back. Guess where I found the organisation most efficient, least waiting, most courtesy . . .? At Waterloo Station. The handling of boat train traffic there shows the English organisational skill at its peak. I wept with pride.—*Paul Holt in the "Daily Express."*

* * *

Engines of War?

So concerned is the Government about the locomotive shortage on British railways, that it has asked the Locomotive Manufacturers' Association if its members can do any repair work. The Association has been asked specifically if it can help in regard to the hostility 2-8-0 locomotives awaiting repair at Richborough, as revealed in the *Evening News* on Friday.—*From "The Evening News."*

* * *

London's Inquiring Travellers

A thousand people a day now ask London Transport's Public Inquiries Section at St. James's Park Station about rail and road services. This is the highest level ever recorded.

In a recent week, over six thousand phone calls and a thousand personal inquiries were dealt with; this is twice the number of persons using the service a year ago. London Transport expected that the number of inquiries in Christmas week would exceed ten thousand.

London Transport officials in charge of the Inquiries Section attribute this rise to the improvements in services introduced at intervals this year. Every time later trains or buses are announced, and every time a Green Line coach route has been restored or a bus service improved, the number of inquiries has shown a sharp rise.

At holiday period, too, Londoners depart from their regular journeys and think of a trip to the country or to a friend in an unfamiliar part. Then they ring up Abbey 1234, ask for "Inquiries," and get their answer.

* * *

Three Soap Tablets—Six Weeks' Gaol

A casual porter pleaded guilty at Tower Bridge court recently before Miss Sybil Campbell to stealing three tablets of soap, worth 1s. 2d., the property of the Southern Railway, his employers, at Waterloo Station on December 19. It was stated that he was employed as a temporary porter dealing with Christmas parcels.

A railway police officer saw three tablets of soap fall from a parcel. The accused picked them up and put them in his pocket.

He was a married man with three children at home, his wife was in hospital having had a fourth baby, and was expected home on Sunday. He had never been in trouble before.

As he expected his wife home on Sunday he asked the magistrate to give him another chance.

Miss Campbell said: You must go to prison for six weeks.—*From "The Evening Standard."*

A MERRY CHRISTMAS TO OUR PATRONS

G.W.R. HOTELS & CATERING DEPT. CHRISTMAS, 1946

Reproduction of the Christmas menu card used in G.W.R. hotels and restaurants

Comments on Transport Bill

Fundamental Badness

What should be emphasised, however, is that the Bill is not to be condemned because of the political colour of its sponsors. Nationalisation is ideal—in theory; but in practice, far from it. The badness of this Bill is fundamental—morally, commercially, and practically—and the prospects of mending it, unfortunately, are virtually negligible.—*From "Engineering."*

A Bad Bill

It was unfortunate for the Government that the proposal of the second reading of the Transport Bill should have fallen to Mr. Barnes, for it is a measure whose defence would have taxed the ingenuity of Sir Stafford Cripps or any of the more expert dialecticians in the Cabinet. This is one of the most doctrinaire measures the Government has brought forward, and is also one of the least defensible measures on any practical ground.—*From "The Western Mail."*

Misplaced Credit

War experiences of remote "control" provide no evidence that bureaucracy is capable of the elasticity requisite to the prompt liquidation of emergencies. Credit given to Whitehall for sundry wartime feats of transport is misplaced. It merely posed the problems. Private enterprise had to solve them. Without private enterprise and personal responsibility, experience teaches that we should get, in emergencies, not practical action, but leisurely "paper-chasing."—*From the "Newcastle Journal."*

Deep Feeling

The debate on the second reading of the Transport Bill noticeably raised the temperature of politics. The Liberals and Independents voted solidly against the Government, and there was a note of real conviction in the speeches from the Conservative front bench that has not always been audible; when so moderate a man as Sir John Anderson says that the passage of the Bill will make him, for the first time in his life, despair of his country, it is evidence of deep feeling.—*From "The Economist."*

Top-Heavy Administration

Administration of each of the four main railway companies is already top-heavy, but it will be much more so under the Government's scheme. The intention to proceed on a functional basis, and to appoint executive committees to operate each of the various forms of inland transport, seems to indicate a confusion of thought, since it is difficult to see how this will enable the objective of an integrated national service to be attained. Moreover, as the Commission must contemplate political interference by the Minister, it is not improbable that their administration will lack the vigour and foresight essential for efficiency.—*From "The Scotsman."*

Transport and Temperance

While the Transport Bill is being examined long and anxiously by industrialists, it has roused Mr. James Hudson, the voice of the temperance movement in Parliament, to immediate action. He has at once realised, what seems to have escaped general attention so far, that the Bill will make the Minister of Transport a far more potent controller of liquor than the Government agents at Carlisle, and Mr. Hudson has called for a return of all the licensed premises which the Minister is to take into the proposed hotels executive.—*From "The Manchester Guardian."*

OVERSEAS RAILWAY AFFAIRS

(From our correspondents)

SOUTH AFRICA

Heavy Goods Traffic

Railway earnings for the week ended November 16, 1946, reached the record figure of £1,294,013, exceeding the figures for the corresponding week of 1945 by £240,837. This large increase in earnings was due to the great volume of goods traffic handled, although increases in several other classes of traffic were reflected. The transport of goods earned £818,911, compared with £586,901 for the corresponding week of 1945. The new rolling stock which has been placed in service has helped to ease the strain, but the railways still have more goods to transport than can be handled adequately by the 60,000 wagons in use.

Imports continue to arrive at Union ports in large quantities, and from the beginning of January to the end of October last year, the railways moved 11,670,000 tons into the interior. This was an increase of 1,970,000 tons over the same period of 1945. In addition to the flow of manufactured goods, the railways have had to handle the large cargoes of grain of all types which have arrived from several different parts of the world for consumption in the Union. From January to the end of September, 1946, nearly 6,000,000 bags of cereals, weighing 594,821 tons, were discharged at Union ports. Coast-bound traffic also has been exceptionally heavy, with loads of coal, wines, dried and deciduous fruit, chrome and manganese for export.

Orders for British Aircraft

Eight Vickers "Viking" aircraft have been ordered for South African Airways by the Railway Administration. The first delivery is expected in May, and the order will be completed in September. The order, placed last year, was the second in 1946 for British aircraft, two De Havilland "Doves" having been ordered last August.

BURMA

Restoration of Train Services

A steady restoration of main and branch line services, and improvement of passenger accommodation and other facilities, took place during 1946. Trains began running through to Mandalay on February 20, and on April 1 considerable accelerations took place in the Rangoon—Prome and Rangoon—Mandalay services. The daily train to Mandalay was speeded up by 12 hr., and that to Prome by 4 hr. By the conversion of goods vans for use as passenger coaches on local journeys (see *The Railway Gazette* of July 19, 1946) more vehicles were made available for long-distance runs, so that by April the Mandalay and Prome trains were composed entirely of passenger stock. An upper class coach with sleeping berth accommodation began running twice a week between Rangoon and Mandalay in July.

The restoration of the Mandalay service was made possible by the erection of a temporary bridge at Mytinge. A new bridge at this point was nearing completion in November. Its opening will permit a further cut of half-an-hour in the Rangoon—Mandalay schedules, and also the restoration of local trains between Mandalay and Tada-U, which are expected to be resumed on February 1 this year. An improved timetable for Rangoon local services was introduced in November. The latter month was one of great progress, and the railways were able to report that it had seen the virtual restoration of pre-war commercial arrangements. In the early weeks of the present year, it is expected that public passenger trains will begin running again to Aungban and Heho; and between Shwebo and Sagaing, with ferry and rail connection to Mandalay.

WESTERN AUSTRALIA

Results for September Quarter

The financial results for the first three months of the financial year 1946-47 disclose a deficiency, after payment of working expenses, of £68,993, and a total loss, after paying interest, of £326,493.

A comparative statement, showing the figures for the last three years, as published in the Report of the Commissioner of Railways for the quarter ended September 30, 1946, is shown hereunder:—

	Three months ended September 30		
	1946	1945	1944
	£	£	£
Earnings ...	1,010,100	961,500	1,107,600
Working expenses ...	1,079,093	962,901	929,968
Deficit ...	68,993	1,401	—
Net revenue ...			177,632
Interest ...	257,500	263,500	261,300
Loss ...	326,493	264,901	83,668
	Per cent.	Per cent.	Per cent.
Working expenses to earnings ...	106·83	100·15	83·96

An analysis of earnings shows that increases were recorded in goods and livestock, but decreases occurred in coaching and miscellaneous traffic. The coaching earnings reflect the decline in defence traffic.

The figures for the three years give a clear indication of the steep rise in costs over recent years. The administration is doing everything possible to keep expenditure down, consistent with reasonable service, but factors beyond its control, such as arbitration court awards and higher costs, prevent any general improvement in the figures. On the other hand, earnings are tending to decrease by reason of loss of defence traffic.

Train-mileage run totalled 1,699,595, an increase of 199,136 over the September quarter of 1945. Increased passenger running occurred in certain districts due to renewal of race traffic, increased diesel-electric railcar services to country districts, and additional steam passenger services. Goods mileage, also, increased on account of the partial elimination of mixed train services, extra trains to reduce long hours for crews, and additional business.

The financial results per train-mile for the quarter were: working expenses, 152·38d.; interest, 36·36d.; and earnings 142·64d. The corresponding figures for the 1945 quarter were 154·01d., 42·15d., and 153·79d.

UNITED STATES

Pennsylvania Radio Equipment

With the exception of certain wayside stations and vehicles still to be equipped, the radio telephone installation on the four-track main line of the Pennsylvania between Pittsburgh and Harrisburg is now complete. The system provides two-way train-to-train, locomotive-to-brakevan, and train-to-station or signal box communication. Radio telephone sets have been installed in 150 passenger locomotives, 131 goods locomotives, 100 brakevans, and 16 signal boxes. The installation covers 319 route-miles, and is the first permanent railway radio system on so large a scale.

Santa Fe Plans for St. Louis

The hearing was opened on November 12, 1946, by the Interstate Commerce Commission, of the joint application from the Atchison, Topeka & Santa Fe, and the Chicago, Burlington & Quincy, for the use of a direct line between Kansas City and St. Louis. As reported in *The Railway Gazette* of August 2, 1946, the plan involves the acquisition of a section of the Gulf, Mobile & Ohio system, and running powers over another portion of that railway. In addition to providing the Santa Fe with direct entrance to St. Louis from Kansas City, the Burlington would acquire shorter routes to Kansas City, and between St. Louis and Kansas City.

PALESTINE

Operation Despite Terrorism

The Palestine Railways continue to maintain a reputation for efficient operation under difficulties to which few, if any, other railways have ever been subject in times of peace. Since the suspension of all services for a few days pending the introduction of adequate security arrangements, as reported in *The Railway Gazette* of December 13, 1946, revised schedules were introduced to permit mainly of daylight operation. The daily passenger train now operates between Haifa and Egypt, in each direction, without undue inconvenience to passengers except for slight delays as a result of the necessity for security patrols.

Through connections to Trans-Jordan, which were interrupted by the destruction of the Yarmuk Bridge on June 16, 1946, have now been re-established by a road link from Samakh to El Hammé, and goods traffic is passing successfully to Trans-Jordan and Syria. This will operate until repairs to the bridge are completed. Haifa East Station, two-thirds demolished by a bomb in September (see *The Railway Gazette* of October 18, 1946), is now open again for main-line passenger traffic, in addition to Haifa Central.

Citrus Fruit Traffic

The recent terrorist activities and curtailment of services, however, have had a serious effect on earnings. Figures of revenue, both coaching and goods, show considerable decreases as compared with last year. In spite of all difficulties, the citrus crop is being handled successfully. Special efforts were made to ensure that oranges, especially, were in reasonable supply for the Christmas market.

FRANCE

Increase in Paris Metro Fare

Fares of the Paris Metropolitan Company, and also of the bus routes under its control, are to be increased shortly. There will be only one class on the Metro, as the first class is to be abolished, and the new flat fare will be fr. 5, which is an increase of 150 per cent. on the previous fare. The new fare, however, is equivalent only to 1¼d. at the official rate of exchange. Despite the great volume of traffic on the Metro, the company's deficit for 1946 is estimated at more than fr. 2,000 million (about £4,167,000 at fr. 480 to the £) against fr. 1,000 million in 1945. This deficit is due mainly to the great cost of re-organising the bus lines and restoring the services which lapsed during the war.

Possible Trends of the Road-Rail Rates Problem*

A survey of some different lines of approach by
Mr. David Blee, Chief Goods Manager, G.W.R.

OF all the features which have contributed to the complex problem of co-ordinated road and rail services for goods traffic, it would, I think, be generally agreed that the factor of rates predominates. A sound solution to this issue would make a greater contribution to the future well-being of inland transport in this country than any other consideration.

The broad facts of the road-rail problem became clear to all progressively between the two wars. On one hand were the railway systems of this country, with their own complementary collection and delivery services, with the obligations of a common carrier, statutory terms and conditions of carriage, a statutory classification of merchandise, a statutory system of charges, and an inheritance carried forward from the Railway & Canal Traffic Act, 1854, of penalties if "undue preference" were given; and possessed of physical resources, as the wartime years proved, of carrying immensely increased traffics.

Side by side had grown up a road transport industry, which, by 1938, comprised a total of 140,000 lorries operated by no fewer than 58,000 owners, most, if not all, of whom operated independently, for whom no one body could speak authoritatively, and who remained independent and unco-ordinated.

Effects of Rate Cutting

Road haulage operators, confined by no statutory obligations as to conditions of carriage, classification of commodities, or rates, sought their business in competition, not only with the railways, but with other road hauliers. The consequent process of rate cutting served both to undermine the economic levels of road rates and to increase the already vast number of exceptional railway rates. Road competition was focused on those commodities in the higher classes of the railway classification of traffics.

We have at last—within both the road and railway industries—come to recognise that these conditions were uneconomic and must be remedied. The initial and fundamental difficulty lies in the basic difference between the principles governing road and railway rates. In the case of road rates, although the methods of costing adopted by the large owners are not identical, it can broadly be stated that no difficulty exists in producing a schedule of costs per ton-mile, or per unit, or per hour, varying according to the weight-capacity or type of lorry; and since road rates have been largely common to all commodities and districts, with establishable basic costs, a rates structure is relatively simple to evolve, sound from the operating viewpoint, and fair.

If railway rates could to any extent be equally based on railway costs, the first aspect of the problem could readily be resolved; but, although many attempts have been made within the railway industry to arrive at some basis of division of track and signalling and other costs incurred in common between goods and passenger train traffic, no formula has yet been produced which satisfactorily resolves this primary requirement to a determination of railway costs for freight traffic; and, in the absence of it, cost as a basic factor cannot be established.

* Abstract of address to the Railway Students' Association on December 18

Before 1928 there was evolved a railway classification of eight classes. Over the years, large numbers of individual exceptional rates had been quoted, and it was the original purpose in the inquiry stages preceding the passing of the Railways Act, 1921, by an enlargement of the range of classes from eight to twenty-one, to absorb the majority of the numerous exceptional rates: in effect, by the interpolation of sub-classes to the previously existing eight. Had this been possible, a considerable simplification of railway charging would have resulted. Since, however, traders indicated clearly their desire for a continuance of the individual bargains, the Act provided for continuance of most of the old exceptional rates and granting of new exceptional rates within limits respectively at the discretion of the railways themselves and of the Railway Rates Tribunal.

Crystallised, there thus existed two entirely different and conflicting principles of charging as between road and rail:—

(i) Road: on establishable costs, with freedom to choose traffics, and with no obligations to accept other traffics, or to serve sparse traffic areas, or in any way to discriminate between rates for raw materials for basic industries and any other commodities; in short, with no obligations as a public service.

(ii) Rail: with obligations as common carriers, with a statutory rates system, based on a classification of commodities on the principle of "what the traffic can bear"; with a vast number of exceptional rates; and with the impossibility even of a broadly accurate assessment of costs as between passenger, freight, and other services.

Necessity for Solving Problem

That the problem must be resolved is accepted equally by the Road Haulage Association and the railways. Students of the road rates position will be familiar with the document issued by the Fawkner Committee of the Road Haulage Association, in which, for the first time, an accredited body responsible for the interests of road operators has drafted a series of scales designed for national use by the road haulage industry. In broad principle, its compilers would probably agree that the primary consideration has been road costings, with a limited introduction of the factor of classification by the provision, in respect of each pay-load weight gradation, of three separate scales of charges. Major regard, however, has been paid to the loadability of traffic.

Concurrently, although the lines on which the railway study has progressed have not as yet been publicised, it is felt that, although a classification of commodities may be required to persist through any future rates structure, the present classification shall be considerably simplified, and shall give far greater weight to factors making for economy in transport—while not eliminating the principle of "what the traffic can bear" with particular regard to raw materials for the basic industries.

In some measure, too, and by a variation of means not finally crystallised, the loadability of commodities may either affect the class into which the traffic falls, or be reflected in percentage variations from the new basic rates applicable to the revised classification; and with a continuation of the principle of exceptional rates.

Avenues of progress opened up as a result of these two parallel lines of inquiry project a common classification of commodities for both rail and road transport with a possible standardised system of distancing and common terms and conditions of carriage. In this, it will be appreciated that a potential common framework has been broadly established.

The outstanding issue must be the actual quantum of the rates applicable to such a framework. Some schools of thought have qualified all their submissions, in the course of these parallel inquiries, by predicating a parity of road and rail rates, under like terms and conditions of carriage, classification, weight gradation, and distance. But this does not accord either with the recommendations of the Transport Advisory Council, which predicates that the rates in each branch of transport shall be founded on conditions peculiar to each branch; and, further, it follows neither that a rates structure satisfactory in terms of rail net receipts will be either adequate or not excessive when applied to road transport, nor that the reverse of these propositions shall prove to be either excessive or inadequate so far as railway net receipts are concerned.

There is no alternative but to follow this type of research through to its ultimate conclusion, and to attempt to produce, on identical principles and in respect of each branch of transport, scales of charges satisfactory separately to each branch: and to examine the results in terms of the scales of charges so projected. It is difficult to predicate what these results may be; but it would not be unreasonable to expect, on broad lines, that for a certain limited radius road rates would prove generally lower than rail. Beyond, there might prove to be a field (up to 120 to 150 miles) within which there would be a reasonable parity. Beyond that distancing point, railway rates probably would prove to be lower than road. It would require to be understood that both rail and road shared equally the obligations of a common carrier.

Mileage Divisions of Function

Another approach may lie in a direction in which a limited experiment has already been conducted: that is, by a series of agreed pre-established mileage divisions of function on a broad commodity basis.

Another approach lies in the possibility of railways performing the trunk haulage of commodities on behalf of road hauliers. Only the principles of the proposal have been examined and definitions not yet attempted. I have predicated the possible results of a comparison of road and rail rates structures based solely on factors relating to each industry, and have suggested that for distances in excess of 150 miles the rail rate would be lower, whereas the reverse would apply for a limited short-distance area. Within the competitive field between these two extremes lies the great bulk of conveyance of manufactured goods, and it is here that an experiment might be made on the lines indicated.

It has been suggested that this could take the form of an agreement that traffic consigned by road to places more than, say, 30-40 miles distant would be bulked and handed to the appropriate railway for haulage to destination. The road hauliers would remain principals in the transactions, charge their own rates and perform the terminal services, the railways undertaking the trunk haul on contract terms.

The Only British Freight Railway Electrification

Industrial changes so reduced the dense freight traffic on the Newport-Shildon line, that electric haulage adopted in 1915 was abandoned in 1935

IN 1911, the North Eastern Railway Company, with Sir A. Kaye Butterworth as its General Manager, instructed the well-known firm of consulting engineers, Messrs. Merz & McLellan, to report on the possibilities of applying electric traction generally on its railway. The suburban services round Newcastle had been electrified in 1904 on the third rail d.c. system.

As a result of the Merz & McLellan report it was decided to proceed with the electrification of the Newport and Shildon line, about 19 miles long, connecting the important mineral sidings at the latter place, an assembly point for the Durham coal traffic near Bishop Auckland, with the Erimus sidings at Newport, near Middlesbrough, and carrying a very heavy mineral traffic. The work involved, with sidings, about 50 miles of track. The route passed along part of that of the old Stockton & Darlington Railway.

At that time, the North Eastern Railway was the greatest mineral-carrying line in the country, and was, therefore, particularly interested in such a development, since a mineral line, once electrified and provided with a sufficient traffic, can prove even more profitable than a passenger-carrying line. Current consumption can be spread evenly over the whole twenty-four hours, and is not liable to sudden peaks, and hence idle equipment is reduced to a minimum and power costs are less. Power was further cheapened by being bought in bulk from public supply companies (the North Eastern was the first company not to construct its own power stations—a principle now universal for new extensions) which were generating electricity from the waste gases of the local blast furnaces. Further economy resulted from the fact that the gradient all the way was in favour of the load, and the electric locomotives thus consumed a minimum of current when descending, whereas steam locomotives continue to burn coal whether steam is shut off or not. Electric locomotives consume practically no energy at all when standing, and since, compared with a passenger locomotive, a freight locomotive has a much larger proportion of its time spent in idleness, this is another important item in the economy of the electrified mineral line. Though the carrying capacity of the line was materially increased, it was found that five electric locomotives were sufficient to perform work formerly undertaken by 13 steam engines.

Two sub-stations were erected, at Aycliffe and Erimus, the former fed at 20,000 volts 3-phase from the Cleveland & Durham Electric Power Company, the latter at 11,000 volts, the mains forming part of the North East Coast Company's distribution system. Work on the electrification was begun on June 6, 1913, and, despite the outbreak of war, was rapidly carried to completion, a limited electric service beginning on July 1, 1915.

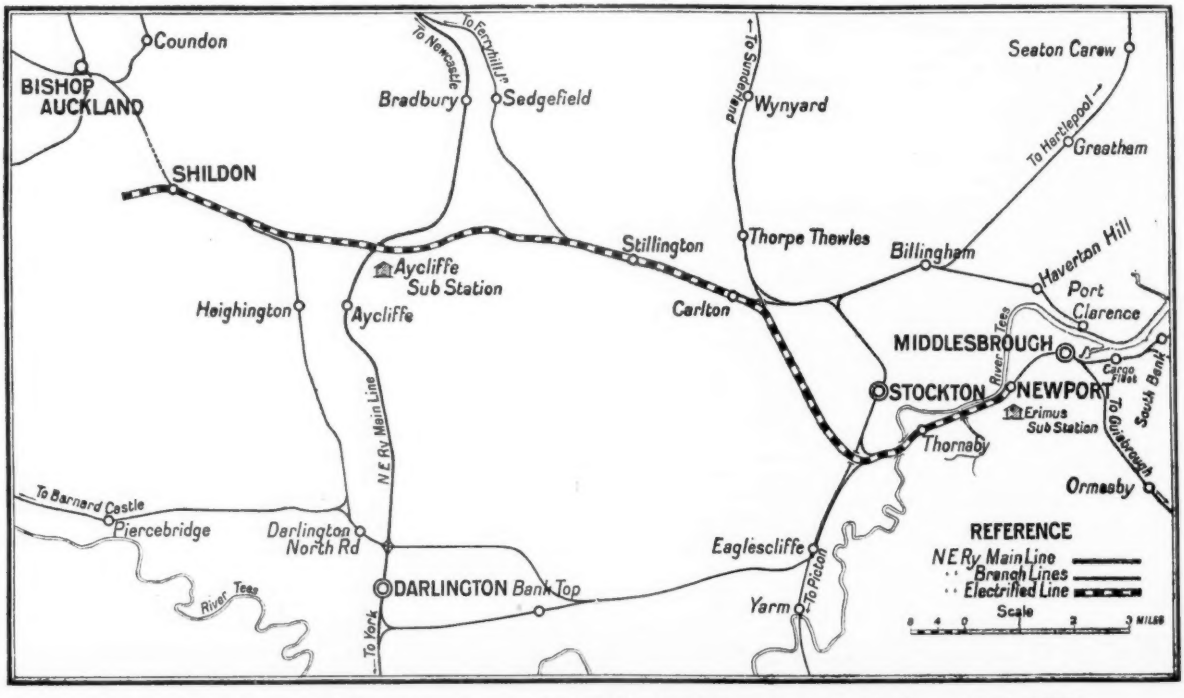
D.C. Overhead System Adopted

The d.c. 1,500-volt overhead system was selected, with a double contact wire to each track—or one wire on subsidiary tracks—and a double catenary suspension, double insulated, using light crosswork steelwork structures with steadying arms to the contact wires, and here and there cantilever structures; automatic tension structures were provided at 1,100-yd. intervals. A certain amount of special work was required in some places. The contact line was sectioned about every 2½ miles and was reinforced by two copper feeders carried on insulators on the track structures. The sectionalising was controlled from signal boxes, under the orders of the Traffic Controller. Track rails were bonded, with crossbonds every 300 ft., and crossbonds between up and down lines, similarly spaced alternately with the others.

The rotary converters were arranged to produce 1,500 volts on the contact wire from their armatures in series, and could deliver 50 per cent. overload for two hours, 100 per cent. for 10 minutes, and 200 per cent. momentarily. Special attention was devoted to the construction of these machines, which were supplied by the British Thomson-Houston and British Westinghouse companies.

Sir Vincent L. Raven, Chief Mechanical Engineer of the North Western Railway, designed the locomotives for the line, which were built at the Darlington shops of the railway. The electric equipment was supplied by the Stafford works of Siemens Bros. & Co. Ltd. There was a central cab supporting two air-worked pantograph collectors, with sloping ends each side, then a popular arrangement, containing the resistances, contactors, cut-outs, and other high-tension equipment; these ends were entered through locked doors, released only by special arrangement. The body was carried on two four-wheel trucks, articulated together, with each axle driven by a totally-enclosed motor, developing 275 h.p. at 20 m.p.h., through single reduction twin gearing.

Forced ventilation was provided, giving 700 cu. ft. of air a minute through each motor. The cab ends had ventilation louvres. The motors on each truck were permanently connected in series. There was a master controller at each end of the cab, giving automatic acceleration, or



Route of the Newport-Shildon mineral line of the N.E.R. electrified on the 1,500 volt d.c. system in 1915. Steam traction was reverted to ten years ago as a result of decreased industrial demand

hand notching up, as desired. In the former case, the controller handle was moved right round, putting a spring load on the contact barrel, which thereafter followed step by step under the control of a lock electrically released by a limiting relay. Current for the master controller circuits, lighting, heating, and other subsidiary functions was provided by a dynamotor set.

These locomotives weighed a little over 74 tons, of which 24 tons were attributable to the electrical equipment; they had an overall length of 39 ft. 4 in. The total wheelbase was 27 ft., the truck wheelbase 8 ft. 9 in., and the distance between truck centres 18 ft. 3 in. Their speed with a 1,400-ton train on the level was 25 m.p.h., and the maximum safe speed 45 m.p.h. They were designed to be able to start an 800-ton train on a gradient of 1 in 100 and to make four trips over the line in the twelve hours. Tests with an 800-ton train gave a maximum drawbar pull of 16 tons and an average speed of 18.3 m.p.h. from Newport to Shildon, with a maximum of 26 m.p.h. up 1 in 230 for 4½ miles. Another test gave the same speed on the level with a 1,400-ton train.

In the decline of heavy industry and of the coal export trade after the 1914 war, many of the collieries supplying this line were closed. With the decreased demand of the Middlesbrough area, the former heavy mineral traffic shrank until it was no longer profitable to work by electricity.

Nevertheless, the equipment was still there to be used, so that no change was made until 1935, when considerable expense would have been necessary to renew the overhead conductors. As the traffic no longer justified this expenditure, the line reverted to steam traction, and the electrical equipment was removed. The locomotives are to be reconstructed for use on the Sheffield—Manchester main line of the L.N.E.R., the electrification of which has been delayed by the recent war.

Avoiding Ice Formation on Conductor Rails

Weather forecasting is the first link in the Southern Railway organisation for removing or preventing accumulations of ice

WHETHER in the form of ice, frost, or snow, frozen water is not a conductor of electricity. Dry snow may be pushed off the top of a conductor rail by the collector shoe itself, but, if allowed to form uninterruptedly, the needle-like crystals of ice and frost adhere strongly to the steel rail, and considerable force is required to remove them. Compressed-air operated steel scrapers have been tried with some success, but the heavy pressures required to cut through the thicker layers of ice formed in bad weather, wear the scraper blades away fairly rapidly, and a train may be without effective scrapers just when they are most needed. The obvious way of avoiding trouble from ice is to prevent it forming. Experience has shown that if sufficient notice is available, this method of attack is the most effective.

Rails do not become coated with ice every time the thermometer drops below freezing point, since there may not be enough moisture in the atmosphere to cause trouble when it freezes. The amount of moisture present in the atmosphere is termed its humidity, and it can be seen that humidity is quite as important as temperature in forecasting whether icing is likely to occur or not. The thermometer does not tell the whole story. To defeat the enemy by making the first move, it is necessary, therefore, to form an accurate picture of weather conditions on the system, and to this end an extensive organisation has been set up.

At 8.30 p.m. every winter evening, detailed official forecasts covering the entire electrified area of the Southern Railway are received at headquarters, from which they are immediately passed on to the control operators on duty at Woking, Swanley, and Three Bridges control rooms. These men have received already reports on the temperature and general weather situation from various outlying points on the system, and they are, therefore, in a good position to judge whether icing conditions are likely to obtain in any part of the areas which they control. If icing is considered likely, a request is passed to the Operating Department, and the oil-spray trains are ordered out.

The function of the oil-spray trains is to spray the head of the conductor rail with low-grade non-freezing oil. This quickly covers the railhead, and when frozen moisture is deposited it does not adhere, but forms a soft "mush" which can be removed fairly easily either by the collector shoes of the trains themselves, or by means of the ice scrapers mentioned, which are carried on these trains and on certain other train units. The heart of each train is an oil-spray coach, which carries some 750 gal. of oil in special tanks. Nine of these coaches have been equipped, and are parked in strategic positions in the known trouble areas; when required, they are attached to any out-of-service electric unit which happens to be handy. The trains so formed operate on schedules specially prepared for them, and cover all main routes. Electric haulage is used normally, but any form of traction will do, and steam or diesel-electric locomotives may be employed if conditions so require.

The oil is piped to nozzles located above the conductor rails, from which it can flow to the railhead. Electrical and mechanical valves change the oil flow from one side of the coach to the other according to the position of the rail, and shut it off altogether when the train is not moving. The amount of oil carried is sufficient to enable the train to run 750-1,000 miles without refilling.

If applied in time, the oil weapon defeats the ice attack, but weather reports are not infallible, and there may come a time when ice forms suddenly and unexpectedly in an exposed locality. To deal with this trouble, experiments are going forward with the use of special chemical fluids to melt ice which has formed already. It so happens that fluids which are most suitable for melting purposes, all have conducting properties and must be used with caution; otherwise, they may accumulate gradually on the track and after a time cause a "flashover" on the insulators supporting the conductor rail. These fluids are carried in separate 150-gal. tanks on the oil spray coaches, and will be used this winter if emergency conditions arise.

London Transport Anti-Frost Measures

Ice formation prevented by liquid sprays and electric heaters

NEW anti-freeze equipment is being installed by London Transport engineers at more than 120 places on the board's railway system, to keep services running this winter. One of the devices used is a de-icer which prevents a film of ice forming over the conductor rails.

Small baths of anti-freeze liquid are placed at intervals on the current rails. The liquid is picked up by the train shoegear, which spreads the anti-freeze along the rail as a thin film and stops ice forming. The next train over the line repeats the process. These baths were first tried two winters ago on the exposed Stanmore branch of the Bakerloo Line; they have given such satisfactory results that their use is now being extended. Fifty baths have been installed so far.

The second device is an electric point heater. These heaters are built into the track at junctions situated in the open air, and by this means the point blades are kept warm enough to resist the formation of ice, and to melt any snow that may settle. Another design keeps the points warm by circulating electrically-heated oil through pipes in the track. New installations just completed bring the number of these point heaters now working on London Transport railways to 215.

A special anti-freeze compound is being generally employed on the tramway system for the first time this winter. The mechanism of the track points previously has proved a source of trouble on frosty nights. Recent experiments have shown, however, that when the pit in which the point mechanism moves is flooded with this compound, it remains liquid for hours at temperatures down to 10° of frost. It is hoped by adopting this measure to reduce frost delays appreciably this winter, and experiments will be tried to test its effectiveness on slippery road surfaces.

London Transport maintains 20 specially-equipped locomotives to remove sleet and ice from the conductor rails during the night hours, when ordinary traffic is not running. The anti-frost train runs in the early hours of cold mornings, before the passenger service begins. It is equipped with three complementary devices, namely, cogwheels running along the conductor rail to break up the film of ice; wire brushes which brush away the fragments of ice; and jets which sprinkle the anti-freeze mixture on the rail as soon as it has been de-iced.

So long as the passenger service is at work, trains are frequent enough to keep the conductor rails clear of ice, but special measures have to be taken to cover the four- or five-hour interval between the last train at night and the first one in the morning. The traffic controller at Leicester Square keeps in touch with the Air Ministry Meteorological Section; when reports indicate that night frosts are likely, he passes the word to the depots, and the special trains go out and work throughout the night to keep the rails clear.

Modern Marshalling Yards

Some features of present-day systems and economies derived from the mechanisation of yards

By J. C. Kubale, M.B.E., A.M.I.Mech.E., A.M.I.E.E., M.I.R.S.E., Chief Engineer of Metropolitan-Vickers-G.R.S. Limited

MARSHALLING yards are some of the less obtrusive elements of railway goods traffic operation, and their importance, perhaps, is not appreciated generally except to those who are responsible for the management of this large section of railway working.

During pre-war years, a considerable amount of investigation was being carried out into methods for improving the operation of these yards. Improvements comprised the incorporation of communication systems by which locomotive drivers and other personnel employed in the yards can be given orders promptly and clearly, and also other devices designed to provide the most efficient means of moving wagons through the yards. Undoubtedly, these investigations will continue in the post-war years, when national policy is more concerned with the efficient operation of our own railway systems than the destruction of those of the enemy. The present time, therefore, seems appropriate to review methods of yard working, consider the various aspects which have to be studied, and discuss means of improvement.

Modernisation, generally, entails revision of the layout and the concentration of working by the installation of some form of centralised control of points, signals, and the speed of wagons within the yard by wagon retarders, or rail brakes as they are sometimes called. The correct application of such devices, however, is a matter of considerable importance, as their utility varies greatly with different types and sizes of yards.

As is well known, moreover, marshalling yards are designed in the first place to operate either as flat yards or gravitation yards. In flat yards, the motive power for moving the wagons from the reception sidings into the various marshalling sidings is the locomotive, which gives individual wagons or groups of wagons sufficient momentum to enable them to run some distance into the sidings.

This method is very slow, and the average time taken to marshal wagons in this way varies from one to two min. per wagon. It is suitable only for sorting wagons in station sidings or marshalling yards where the daily traffic turnover is of the order of a maximum of 500 wagons per day, and even the use of power-worked points generally is not justified.

Gravitation Yards

In gravitation yards, a descending gradient is constructed at the neck of a group of sidings, either to assist the locomotive or to allow wagons detached from a train to gain sufficient speed to carry them into their appropriate sidings. Sometimes, a shunting locomotive will be dispensed with, in which case the train of wagons will move by gravity from the reception lines and the individual wagons will be detached as required, after which the separate wagons will run by gravity to their respective marshalling sidings. By the last method, the movement of the train must be controlled, and various means are used for this purpose. Hand brakes may be applied to the leading wagons of the train, and released sufficiently to allow the train to move towards the marshalling sidings at the required speed, or a fixed brake, which is operated to allow single wagons or groups of wagons to be detached from the train and thus marshalled into the sidings, may be installed. Another method which has been used for moving wagons from a reception siding to the marshalling sidings is for the train to be moved forward slightly by means of locomotive, gravity, or a capstan and cable to a device which connects with the wagon wheels or axles, and imparts to single wagons or small groups of wagons a sufficient velocity to separate them from the train and enable the wagons to run into the sorting sidings. Such a system is not practicable for the usual type of marshalling yard, and its application generally is found in conjunction with special plant, such as coal-handling equipment, where it is used to move wagons across a tilting table or weighbridge from which the wagons finally travel by gravity over suitably-graded track to the marshalling sidings.

In many yards, both flat and gravity, the movement of the points is accomplished often by power-worked point machines controlled from a central cabin; the power medium is either electric power or compressed air. Where point machines are used, the movement of the points is protected by a short track-circuit which detects the presence of a wagon on the points and prevents their being moved when the track circuit is occupied, thus precluding the possibility of derailment from this cause.

The "Mechanised" Yard

The most modern method of marshalling yard operation is to control both the positions of the points and the speed of the wagons from a central point in the marshalling area. This combination of route and speed control comprises what is called the "mechanised" yard, which has developed into a highly efficient sorting machine for the marshalling of wagons of all types under all weather conditions with a minimum of ground staff, and makes the most efficient use of shunting locomotive power.

There are many examples of such yards in England, on the continent of Europe, and in the U.S.A. In England, Whitemoor up and down yards and Hull inward yard, both on the L.N.E.R., and Toton on the L.M.S.R. are all equipped with power-operated points, automatic point operation, centrally controlled retarders, and communication systems of varying types.

When improvements to existing yards, or the construction of new yards is being considered, the following questions arise: (a) what are the principal factors to be studied and decided upon for the provision of a gravitation yard? (b) what traffic, or what size of yard, will enable the use of mechanisation to be justified?

A yard worked entirely by gravity without the use of locomotives is uncommon because the possibility of constructing such a yard depends almost entirely on having a favourable site with suitable contours providing the descending gradient for a sufficient distance, and because of other disadvantages which are brought about by the various running characteristics of wagons.

It will be assumed, therefore, that locomotive power will be used for pushing the train from the reception sidings to the sorting sidings, and that the wagons are to run by gravity from a hump to the marshalling sidings. The most important factors then will be the number of reception and marshalling sidings, the height of hump, and the arrangement of points and gradients on the descending portion to allow the wagons to travel into the sidings.

The number of reception sidings will be governed by the incidence of arrival traffic, and the number of marshalling sidings by the various classifications of routes and wagon destinations which are allotted to the yard. The length of the marshalling sidings will be governed by the rate at which wagons can be passed from the reception sidings and the rate at which they can be made up into new trains and despatched out of the yard. Usually, the total wagon capacity in the marshalling sidings is equivalent to the number of wagons to be handled in 24 hours.

The height of hump and selection of gradients will be determined by the type of traffic to be handled; that is, whether the majority of the traffic is to be empty wagons, general goods, or a large proportion of fully-loaded wagons, and also whether the speed of the wagons is to be controlled by means of hand braking with "wagon chasers" or by wagon retarders.

With hand braking, the average gradients must be such that wagons do not reach a speed dangerous for the "wagon chaser" to apply the hand brakes, and usually it is found that this limits the height of the hump to such an extent that all types of wagons cannot be handled in all weather conditions, with the result that the overall annual efficiency of the yard is less than it might be. It is often the case in such an inter-connected system as a large railway network that troubles are cumulative, and that inefficient working of a portion of the system has far-reaching consequences. It is not difficult to visualise that when bad weather occurs, severe cold, snow, or fog may delay trains, and if there is the further delay caused by difficulties in the working of marshalling yards, the result will be chaotic if such a state persists for many days. Therefore, it is imperative for the smooth working of a railway to ensure, as far as possible, that the centres of concentration of the freight working system, the marshalling yards, are efficient under all operating conditions.

Advantages of Mechanisation

In the development of the mechanised yards, some of the disabilities of other types of yards have been overcome. It is possible now with the use of retarders and power-worked points and automatic point operation, to have a sufficient height of hump and to arrange the gradients to allow the worst-running wagon to run clear of the shunting leads under all weather conditions, and at the same time to concentrate the working and reduce the operating expenses of the yard. The obvious saving effected by a large mechanised yard in comparison with a non-mechanised yard is in the labour of brakesmen and pointsmen. There is, however, a further saving in engine power because, with a properly designed hump profile, wagons can be run over the hump at approximately the same rate for all types of wagons, in all conditions of weather.

Furthermore, considerably less locomotive power is used for "pushing down" roads and correcting wrong shunts, and when propelling wagons over the hump there are fewer interruptions to humping by reducing the chances of wagons stopping in the shunting leads.

It is difficult to generalise on the economies which may be effected by mechanisation of yards of various sizes, because of the diversity of kinds of traffic handled by different yards, and also because of local operating conditions, but the following salient features result from a study of several yards operating under English conditions.

Labour.—The annual labour cost for the personnel employed in the sorting area, that is, in the reception sidings and in the sorting zone of the marshalling sidings, is approximately the same for a non-mechanised yard and for a mechanised yard when the daily handling capacity of each is about 2,000 wagons. For yards having a daily capacity of 5,000 wagons, the labour cost of a mechanised yard is approximately one-half of that of a non-mechanised yard, and for yards of intermediate capacity the saving is proportional to the size of the yard.

Locomotive savings.—The difference in locomotive power required between a mechanised and a non-mechanised yard occurs in the amount necessary for propelling a train over the hump from the reception sidings, the "humping time," and that required for correcting wrong shunts and "pushing down" the wagons in the marshalling sidings. In a non-mechanised yard, approximately from 8 to 6 engine-hours per 1,000 wagons shunted is required for this duty in yards having handling capacities of 2,000 and 5,000 wagons per day respectively. For a mechanised yard, this factor is independent of yard capacity and amounts to approximately 4 engine-hours per 1,000 wagons.

The result of mechanised operation, therefore, is the more efficient use of locomotive power for marshalling and an increased availability of the locomotive for "other duties." It is for the better use of the locomotive power when it is not needed for propelling a train from the reception lines that the use of radio and/or loudspeaker communication between the directing staff of the marshalling yard and that on the locomotive can be used most advantageously.

Capital costs.—The incorporation of a means for mechanised working during the construction of a new yard would seem to be axiomatic, as the increased expenditure required for the mechanical appliances, power plant, and communication systems amounts to a small portion of the total cost, and the problem is that of choosing proven systems and the extent to which they shall be applied to the particular case.

Alterations Involved

Modernisation, however, usually involves extensive alterations to track, gradients, and buildings, and the financial justification for the necessary expenditure often is difficult to show, even in the case of a large yard, when only the direct savings which are estimated to be made in that yard are considered. The ultimate benefits to be obtained are greater than those items outlined above because of the interdependence of separate zones and the working of each affecting the combined efficiency of a railway system. This then becomes a problem, not only of goods yard analysis, but of system analysis into which should come also the consideration of "improvement," wherein the better working conditions for personnel by the use of modern methods should be weighed in the scale of progress, as well as other details.

Also, it would seem that, if an installation such as a marshalling yard has been in operation for many years, it should have earned during that time something towards its eventual replacement. If this were so, one would expect to see many improvements carried out in the future.

Yard Layout

Apart from every other detail, the yard layout itself is the *sine qua non* of every marshalling yard development. The general scheme of traffic flow should be studied to economise in movement and thus save locomotive power. In the marshalling area a bad layout militates against improvements in many ways, and once a yard is built according to a bad plan it is exceedingly difficult to carry out any alterations to alleviate the faults.

An early form of layout was the "herring-bone" type, in which marshalling sidings branched off one or two main shunting leads. Such a yard is simple to construct, and no doubt has certain advantages for "flat" shunting, but none whatever for "gravity" shunting according to present-day methods. Modern practice has developed the so-called "balloon" layout in which fans of sidings are grouped so that wagons running to different tracks separate as quickly as possible after leaving the hump, the clearance points of all sidings approximately are equidistant from the hump, and the zone in which wagons are controlled is as short as possible. By this means, the height of the hump is reduced to a minimum and the amount of braking necessary by retarders consequently reduced.

Much investigation into the technical aspects of marshalling yard design was being carried out in England, on the Continent, and in the U.S.A. before the war, and many installations were constructed as a result of these studies. The continuation of these developments in the post-war planning of railway improvement seems to be a matter which should be pursued vigorously.

G.W.R. HANDLES TIMBER FROM GERMANY.—A consignment of 1,200 tons of soft-wood logs, cut by Royal Engineers personnel in the British Zone in Germany, arrived recently in the ss. *Ossian* at Swansea Docks, and was distributed by the Great Western Railway to timber yards in South Wales.

POLES HELP WITH CHRISTMAS PARCELS TRAFFIC.—Over 1,000 men from the Polish Resettlement Corps were employed at London main-line railway depots during the Christmas season to help handle the rush of parcels traffic. This arrangement followed negotiations between the Ministry of Transport and the National Union of Railwaymen, the union having agreed to the temporary employment of the Polish labour. The men did not handle ordinary goods traffic.

Through the Kicking Horse Pass in Canada

A train running alongside the Kicking Horse River on the Canadian Pacific Railway

Engineering Library

New L.M.S.R. Locomotives

2-6-0 *tender and* 2-6-2 *tank locomotives for secondary services*

THE first of a new class of 2-6-0 tender and 2-6-2 tank engines have been completed recently at the Crewe works of the L.M.S.R., to the designs of Mr. H. G. Ivatt, M.I.Mech.E., the Chief Mechanical Engineer. The new locomotives are designated "class 2" in the standard L.M.S.R. power classification based on tractive effort and boiler capacity. Photographs of the new engines are reproduced in the accompanying pages, and a table of the principal dimensions is given below.

PRINCIPAL DIMENSIONS

Driving wheels	5 ft. dia.
Cylinders (2)	16 in. dia. × 24 in. stroke
Boiler pressure	200 lb. per sq. in.
Boiler—Length of barrel...	10 ft. 9⅞ in.
Outside diameter	4 ft. 3 in., increasing to 4 ft. 8 in.
Heating surface—	
Tubes	924·5 sq. ft.
Firebox	101 sq. ft.
Total (evaporative) ...	1,025·5 sq. ft.
Superheater	134·0 sq. ft.
Combined surfaces ...	1,159·5 sq. ft.
Superheater elements ...	12—1⅜ in. dia. outs.
Large tubes 12—5⅛ in. dia. outs.	10 ft. 10½ in. between tubeplates
Small tubes 162—1⅜ in. dia. outs.	
Grate area	17·5 sq. ft.
Tractive effort at 85 per cent. boiler pressure ...	17,400 lb.

The two new types are indentical in design, except that one has a separate tender and the other carries side tanks and coal bunker on its main frames. Both are intended for mixed traffic work, but the 2-6-0 engine is intended more for light main-line and cross-country freight and passenger working where greater coal and water capacity is required, whereas the 2-6-2 tank engine is intended more for branch-line services, including push-pull working. In both, it was essential to attain very low axle weights in order that the engines could run practically all over the system.

It has not been general practice hitherto on British railways to design and build new locomotives for secondary services. The new L.M.S.R. locomotives, however, although of small size and light weight, incorporate every modern development which has been found successful on the larger main-line types. It is naturally desirable that secondary service locomotives should be capable of the highest attainable mileage per annum and between repairs, that they should be quickly and easily serviced at the sheds, and that they should be economical to run. As their prospective life may be over 30 years, they should be capable of good acceleration and relatively high maximum speed so as to be able to meet any future speeding up of branch-line services.

Locomotives built to the designs of 20 or more years ago are unable to fulfil these requirements, and in producing these two new designs, the L.M.S.R. was influenced by the fact that a large number of "class 2" locomotives of old design would have been broken up during the years 1939 to 1945 had the war not made it necessary to give them a further lease of life. Now, however, they are gradually being withdrawn from service as their condition warrants, and the new engines will take their place.

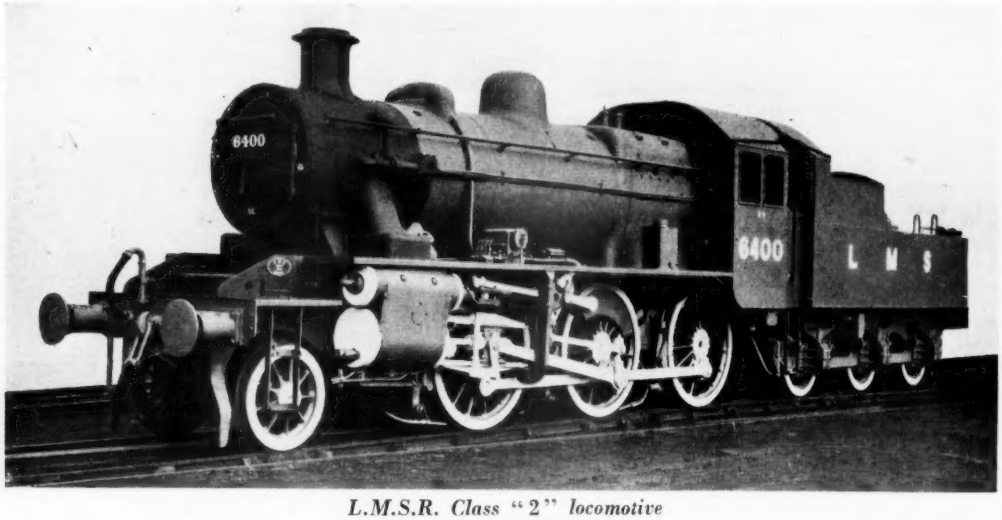
Boiler and Firebox

The boiler is of normal construction and the shell is of carbon-steel throughout. The barrel, which consists of two rings, is tapered equally at top and bottom, the outside diameter at the front end being 4 ft. 3 in. and at the firebox end 4 ft. 8 in. The front ring is in ½-in. thick plate and the back ring $\frac{17}{32}$ in.

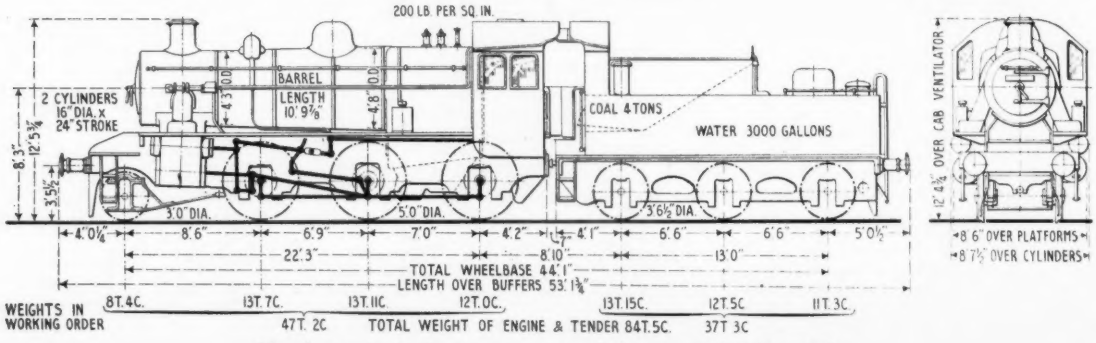
The smokebox tubeplate is of the drumhead type, and there are 12 flue tubes, 5⅛ in. dia. outside and 7 s.w.g. thick, and 162 small tubes, 1⅜ in. dia. outside and 12 s.w.g. thick. The length between tubeplates is 10 ft. 10½ in. A large steam dome is provided and contains a grid-type regulator disposed vertically.

Top-feed clack-boxes of the latest type are fitted, in which the clack valves and seatings are integral with the coverplate casting, so that only one joint is necessary to each feed pipe. Instead of perforated trays, a simple arrangement of sloping plates is secured to the longitudinal stays underneath the top feed outlet, to deflect the incoming water round the barrel side clear of the tube nest.

The firebox is of the Belpaire type with a steel wrapper plate $\frac{17}{32}$ in. thick. The inner firebox is of copper $\frac{9}{16}$ in. thick. Monel metal side stays ⅝ in. dia. are mainly employed with 1⅛ in. dia. in certain rows where the tendency to fracture is greater. All stays are nutted on the fireside. The firebox is 5 ft. 11 in. long



L.M.S.R. Class "2" locomotive



Showing principal measurements of the new 2-6-0 *locomotive*

outside and 4 ft. $0\frac{7}{16}$ in. wide, giving an area of the grate of 17·5 sq. ft.

A rocking grate is provided consisting of six rocking sections divided into two groups of three fore and aft which may be rocked independently. The operating gear is so arranged that two different travels may be employed, *i.e.*, the full travel for fire dropping when the engine is over a pit, and a shorter travel for agitating the fire to eliminate ash and break up clinker whilst the engine is out on the road. The ashpan is of the self-emptying type having two bottom flap doors; these are connected by a linkage and operated by a lever from the ground. One front damper door only is provided.

The smokebox is of the plain cylindrical type with a solid bottom resting on a saddle of conventional design. The blast pipe has a plain circular cap $4\frac{3}{8}$ in. dia. which incorporates the blower ring. The smokebox is of the self-cleaning type having plates and wire-mesh grid arranged in such a way as to eject all accumulations of char through the chimney when the engine is working.

The main frames are of the conventional plate type and consist of carbon-steel plates 1 in. thick. Hornstays bolted direct to extensions downwards of the frame plates themselves are fitted, and, in order to maintain the frames at the correct distance apart, pin-jointed cross-stays are attached across the engine from driving hornblock to hornblock.

The driving horns have one-piece hornblocks of the "horseshoe" type, whilst the leaders and trailers have separate guides, and all are fitted with composite liners bolted to the horn guides. These liners consist of flanged plates of manganese steel riveted and welded to mild-steel backing plates. The faces of the axlebox in contact with the horn guides are also provided with manganese-steel liners welded to the body of the axlebox.

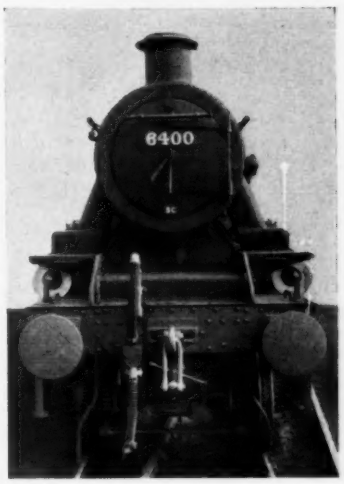
The coupled-wheel axleboxes are steel castings with pressed-in horseshoe brasses. A sliding underkeep of gunmetal, which has an ample oil capacity and contains a worsted-trimmed oiling pad, is provided, and the oil feed from the mechanical lubricator is fed direct to the underkeep, thus permitting an uninterrupted bearing surface of the crown of the box. The journal diameter is $7\frac{1}{2}$ in. and the length of the bearing $8\frac{1}{4}$ in.

Cylinders and Valve Gear

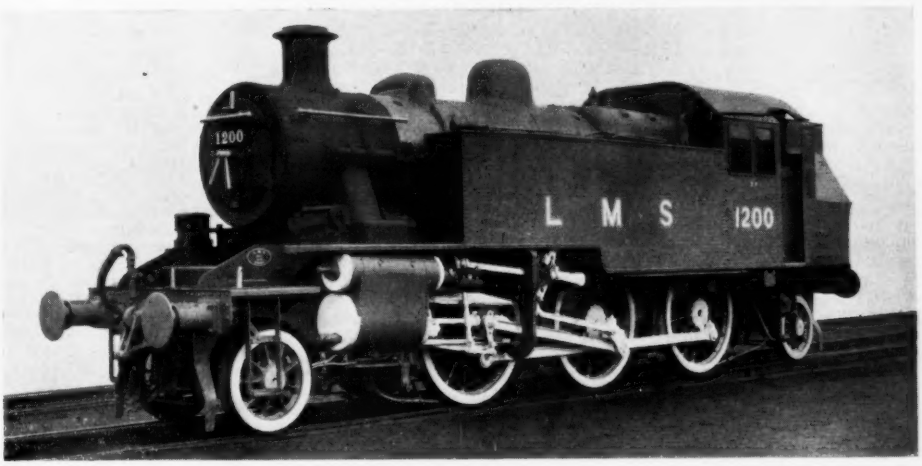
The two cylinders of 16 in. dia. and 24 in. stroke are disposed outside the frames, and 8 in. dia. valves of the piston type are operated by the conventional Walschaerts valve gear. The links comprising the "lap and lead" motion of this valve gear, as well as the reversing gear, are fitted with case-hardened steel bushes and pins of the same material, and these are lubricated with grease. The remaining links and details have phosphor-bronze bushes and are oil lubricated.

The piston head is designed to incorporate a bronze spring-loaded slipper which carries the head in the cylinder. For reasons of weight saving the crosshead is of a new built-up design.

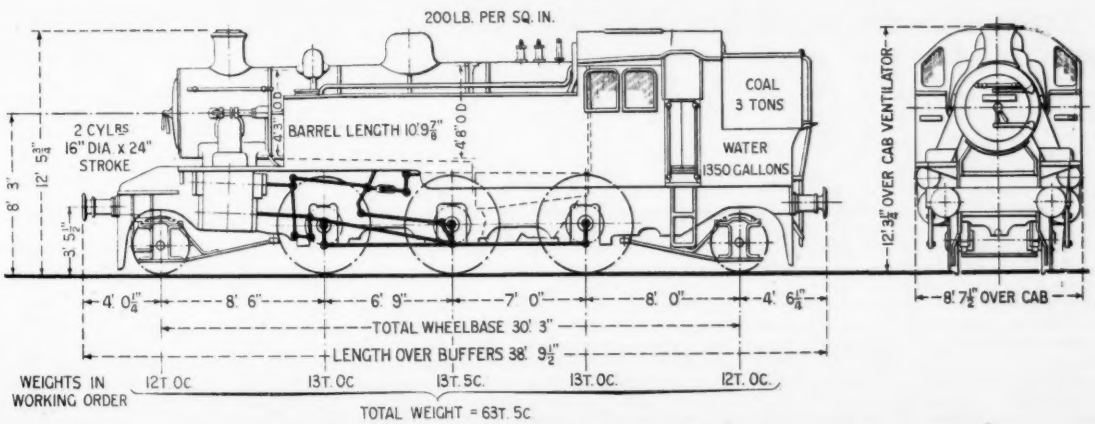
All three pairs of coupled wheels are provided with laminated springs, with compression spring hangers, and two types



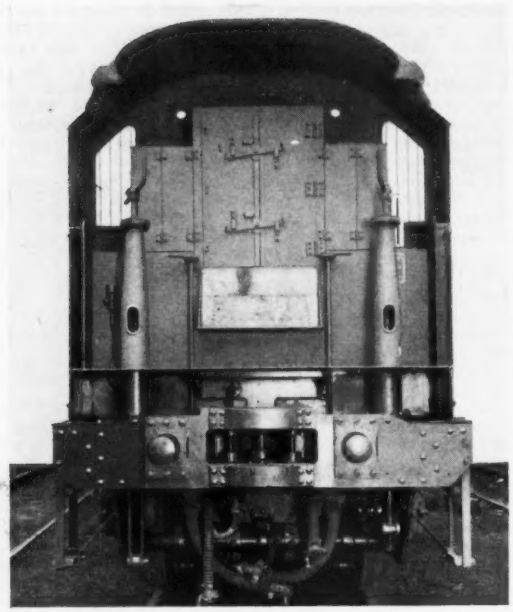
Front view of 2-6-0 *locomotive*



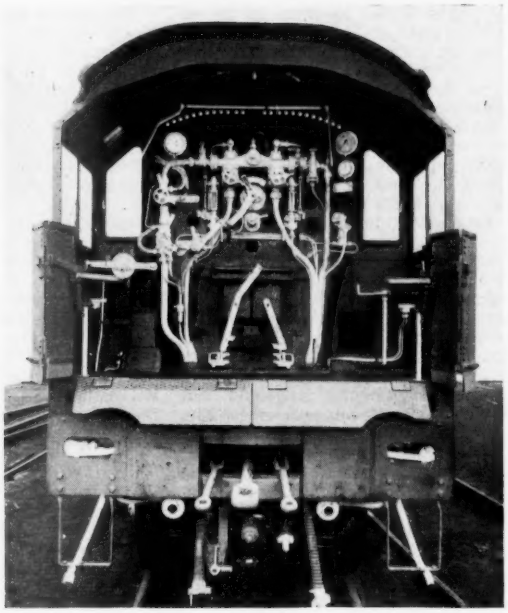
L.M.S.R. Class "2" tank engine



Showing principal dimensions of the new 2-6-2 *tank engine*



Tender view of 2-6-0 locomotive



Cab view of 2-6-0 locomotive

of spring are being applied for comparative purposes. Those of L.M.S.R. design have 8 plates 5 in. × $\frac{5}{8}$ in. section working at a span of 3 ft. 6 in. centres when loaded. These are of carbon steel, and the top plate has forged eye ends. The plates are secured in the buckle by means of a vertical rivet.

The second type of spring is designed and manufactured by the firm of William Griffith, and consists of six plates 5 in. × $\frac{11}{16}$ in., and, of course, the same working span of 3 ft. 6 in. The feature of these springs is that the top three plates have projections on each side at mid-span which fit into slots in the buckle and prevent movement of plates in the buckle.

In addition, an elongated cotter-rivet is fitted to hold all the plates together. A further speciality of the Griffith spring is: the plates are ground and shot blasted to increase fatigue resistance.

The same design of truck is used for the leading wheels of both the tender engine and the tank. It is of the bar-frame type, and side control is effected by swing links. A spring-loaded friction retarder is provided to supply the necessary damping. The trailing truck of the tank engine is of similar design, but has spring side control. The bearing springs are of the coil type and the axleboxes of bronze have a journal size of $6\frac{1}{4}$ in. dia. and $10\frac{7}{8}$ in. length.

New Tender Design

The tender of the 2-6-0 engine is of a completely new design and is arranged to give good conditions for tender-first running. The tank, which is to all intents and purposes rectangular, affords a good visibility from the cab which is provided on both engine and tender. The coal bunker, which is also of rectangular section, is narrower than the tank.

The construction of the tender tank, as well as the tanks and bunker of the 2-6-2 engine, is partially welded, partially riveted. An external feed sieve is provided on both classes to enable the water to be effectively sieved before passing to the injectors, the sieve portion being withdrawable for cleaning purposes.

The coal and water capacities for the 2-6-0 locomotive are 4 tons and 3,000 gal., and for the 2-6-2 tank engine, 3 tons and 1,350 gal., respectively.

The following is a list of the principal items of equipment provided:—

Monitor injectors.

Steam brake on engine and tender, with vacuum brake fittings for working fitted trains, and the standard combination drivers' brake valve.

Water pick-up gear on the tender of the 2-6-0.

Silvertown mechanical lubricators to cylinders and axleboxes.

Steam sanding gear.

Grease lubrication of brake and water pick-up gear pins, and to the rocking grate and ashpan gear.

Manually-operated blowdown in addition to the standard continuous blowdown equipment.

Carriage warming apparatus.

Fire-iron tunnel placed on R.H. side platform in front of the cab on the 2-6-0 engine.

The ten 2-6-0s to be built this year are to be numbered 6400-6409, and the ten 2-6-2 tanks, 1200-1209.

Turbo-Generator for Greenwich Power Station

BEFORE the outbreak of war in 1939, London Transport had in hand the conversion of the Greenwich generating station from 6,600 volts 25 cycles output to 11,000 volts 50 cycles. The scheme included, also, enlargement of the station in order to meet additional loads arising from the extensions to the Central Line which were in progress from Liverpool Street to Epping, and the new loop from Leytonstone to Roding Valley *via* Wanstead, Newbury Park, and Hainault. The work involved the installation of four new turbo-generators, and the re-winding of three existing generators, but, together with the extensions to the Central Line, it was interrupted by the war, by which time only three of the new machines had been installed.

With the resumption of work on the Central Line extensions, London Transport has now placed an order for the fourth turbo-generator required for the Greenwich generating station; this will be installed by the British Thomson-Houston Co. Ltd. The machine will be capable of generating 20,000 kW. continuously, but the economical output will be 16,000 kW.; it will produce a three-phase 50-cycle a.c. supply at 11,000 volts between lines, and will operate at 3,000 r.p.m.

The turbine will be suitable for use with steam at a pressure of 400 lb. per sq. in., and at a temperature of 750° F., both measured at the stop valve, and it is to be equipped with three stages of bled-steam feedheating, arranged to yield a final feed temperature of 300° F. at maximum continuous rating. The condensing equipment will include condenser, duplicate extraction pumps, air ejector, and two evaporators. The condenser will be of the surface type, using circulating water drawn from the River Thames, and requiring 1,092,000 gal. an hour when at a temperature of 60° F. in order to produce a vacuum of 28.7 in. with the turbo-generator producing 20,000 kW. A feed pump capable of delivering 300,000 lb. of water an hour at a pressure of 534 lb. per sq. in. is also included.

COLLISION AT DONCASTER, L.N.E.R.—A collision occurred at Doncaster Station, L.N.E.R., on December 30, when a train from Leeds to Kings Cross which was pulling into the station ran into the rear of a Hull-Kings Cross train standing at the platform. Several coaches of both trains were damaged, and some derailed. Twenty-four passengers and four of the train staff were injured. The up main line was blocked for some hours.

New Southern Railway Main-Line Coaches

Three-coach sets with compartment and saloon seating, incorporating ideas submitted by passengers

WHEN the Southern Railway exhibited the first of its post-war main-line passenger coaches at Waterloo Station in October last year, visitors were given an opportunity of completing a questionnaire showing their preference for various types of accommodation and other facilities.

Many of the features then shown to be favoured have been incorporated in 24 3-coach sets of steam-hauled main-line stock now under construction by the company, the first of which was placed in service on the "Atlantic Coast Express" on December 12 (see editorial note in our December 13 issue).

Three-coach set, consisting of two semi-saloon brake thirds and a compartment composite

It was proved from the questionnaire referred to above, that compartments are preferred to seating in saloon type coaches, and of the 144 seats provided in the new sets, 80, therefore, are in compartments, as against 64 in the saloon sections. Each set consists of two third class brakes and a first and third class composite coach. The third class vehicles include both compartment and saloon sections, but all seating in the composite coaches is of the compartment type. In addition to the usual end doors, all vehicles have a central entrance vestibule with doors on both sides, and the doors giving access from the vestibules to the passenger accommodation are fitted with windows so that travellers joining the train are able to see at once where vacant seats are available. The coaches measure 67 ft. 1 in. over buffers, as compared with the length of 64 ft. of existing main-line stock. An additional 3 in. of width has been secured in the compartments by curving the body sides and paying special attention to the flush fitting of doors and windows.

A good outlook is obtainable from all seats by reason of the fact that the window sills are lower than usual, and this is particularly noticeable from corner seats on the corridor side.

The total seating capacity of a three-coach set is 144 passengers, 120 third class and 24 first class. The weight of the third class brakes is 33 tons, and of the composite coaches 34 tons. The vehicles are 9 ft. 6 in. wide overall. A series of 24 of these sets is under construction, half of which will be completed in time for the holiday traffic next summer, and the remainder by the end of 1947. The coaches are being built to the designs of the Chief Mechanical Engineer, Mr. O. V. Bulleid. The bodywork is dealt with at Eastleigh, and the underframes and bogies at Lancing.

Lighting and heating have been studied with special reference to the preferences expressed by passengers. In addition to the general roof lighting, individual bracket lamps are fitted in the first and third class compartments. Heating has been extended to the corridors and lavatories; two heaters are provided in the first class compartments, one under each seat. The seats in both classes are hammock-sprung, with insert cushions, and liberal space underneath for heavy baggage. The brake compartments are provided with a periscope which gives the guard a clear view ahead over the carriage roofs while seated. A manually operated wiper with a handle convenient to the guard's position is provided for clearing rain and snow from the periscope glass.

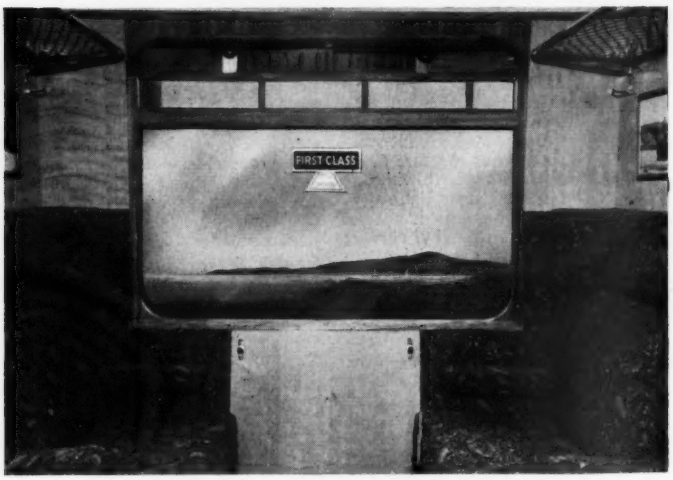
The carriage ventilators shown in the illustrations which accompany this article are of a temporary type, the adoption of which has been necessitated by shortage of materials. In due course, these ventilators will be replaced by large sliding glass panels, which will still further increase the unobstructed outlook. In response to public requests, special attention has been paid in these coaches to the design and installation of the ventilators in the lavatories. (See also page 18).

L.M.S.R. LOCAL SERVICE REDUCTIONS.—Several reductions in L.M.S.R. passenger train services on local lines in Yorkshire will take effect on January 6. The areas chiefly affected are Leeds, Bradford, Halifax, Skipton, and Huddersfield. Similar reductions have been going on for some time as a result of changed industrial conditions, many factories having abandoned the shift system, with consequential changes in the times of peak passenger traffic. The economies are not being made primarily to save coal, but as an ordinary matter of train service adjustment, and are not related to the cuts in main-line trains made recently at the request of the Ministry of Transport in order to release locomotives for the movement of coal traffic.

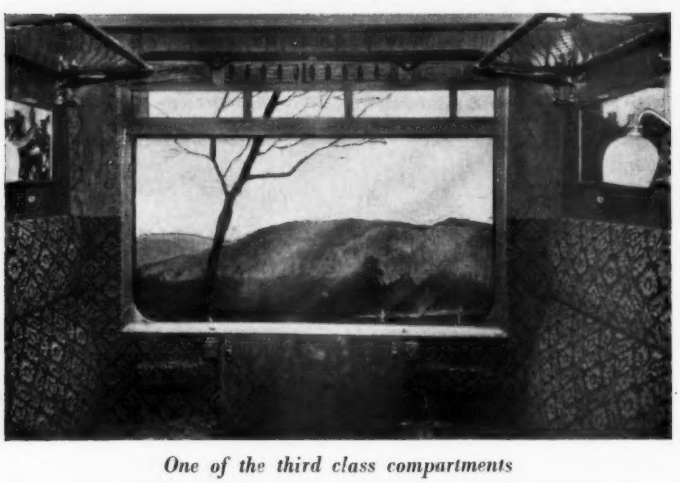
DERAILMENT AT BYFLEET, SOUTHERN RAILWAY.—The locomotive and all twelve coaches of the 2.20 p.m. Bournemouth to London express were derailed south of Byfleet Station on December 27. The engine came to rest on the ramp of the station platform. A statement issued later by the Southern Railway said that three passengers were injured, but none of them seriously. Both up lines were blocked, and the down main line was closed because of the danger of the derailed engine toppling over. A bus service was put into operation between Woking and Weybridge.

EXTENDED L.M.S.R. SEAT RESERVATIONS.—The L.M.S.R. announces that, as from January 1, seat reservation facilities have been extended to the following four additional trains: 5.45 p.m. Euston to Liverpool Lime Street; 6 p.m. Euston to Manchester London Road; 10.10 a.m. Liverpool Lime Street to Euston; and 9.45 a.m. Manchester London Road to Euston. These additions bring the total number of L.M.S.R. expresses on which seats can be reserved up to 22. As from January 1, also, the 8 a.m. Liverpol Lime Street to Euston, and 3.45 p.m. Euston to Liverpool Lime Street, have been open to ordinary seat reservations; hitherto reservations by these trains have been available only to through passengers to and from Ireland.

New Southern Railway Main-Line Coaches

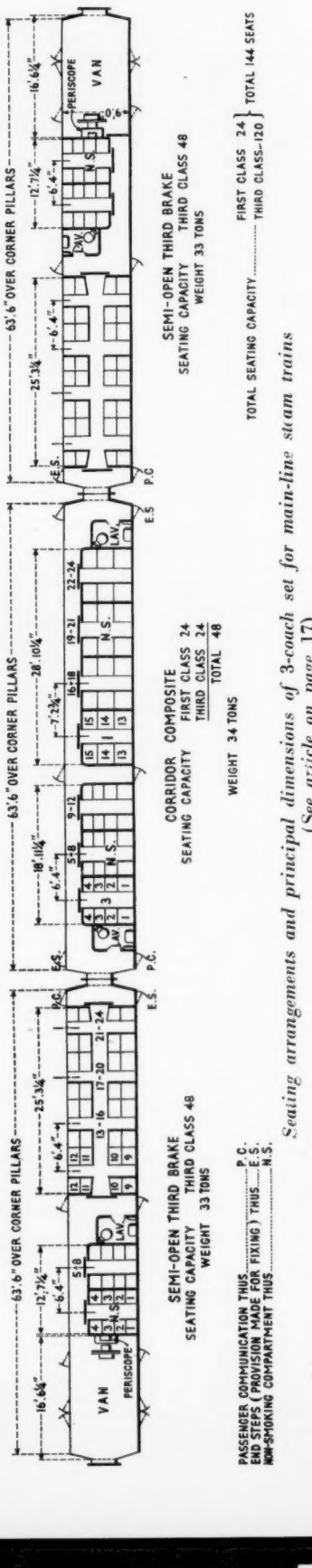


First class compartment in centre vehicle of 3-coach set



One of the third class compartments

Saloon section of semi-open third brake



Seating arrangements and principal dimensions of 3-coach set for main-line steam trains

(See article on page 17)

RAILWAY NEWS SECTION

PERSONAL

New Year Honours

In the New Year Honours List, Sir William Valentine Wood, M.Inst.T., President of the Executive, London Midland & Scottish Railway, has been made a K.B.E.

Mr. Robert John Mathison Inglis, C.I.E., T.D., F.R.S.E., M.Inst.C.E., Chief of the Transport Division, British Element, Control Commission for Germany (lately Divisional General Manager, Scottish Area, L.N.E.R.) has been made a Knight Bachelor.

(*See further selection of names on page* 21.)

Chairmen of R.C.H. Conferences

The following have been elected Chairmen of the undermentioned Railway Clearing House Conferences for 1947:—

General Managers' Conference: Sir Eustace Missenden, General Manager, Southern Railway.

Operating Superintendents' Conference: Mr. S. W. Smart, Superintendent of Operation, Southern Railway.

Coaching Traffic Superintendents' Conference: Mr. C. G. G. Dandridge, Passenger Manager Southern Area, L.N.E.R.

Goods Managers' Conference: Mr. A. E. Hammett, Commercial Superintendent, Southern Railway.

Sir Arthur Griffin, until recently Chief Commissioner of Railways, India, has been elected a Director of Rhodesia Railways Limited. He proceeds to Rhodesia shortly and will take up the appointment of General Manager of the Rhodesia Railways when Mr. W. J. K. Skillicorn, as already announced, retires from that post on April 30 next. At the same date Sir Arthur Griffin will take up office as Resident Director in Rhodesia.

Sir Leslie Boyce (Chairman of the Gloucester Railway Carriage & Wagon Co. Ltd.), leader of the United Kingdom Trade Mission to China, and the other members of the mission, have returned to England.

At January 1 the balance of the shares of Cable & Wireless Limited passed into Government hands, and a new board of directors has been appointed to operate from the same date, with Sir Stanley Angwin as Chairman, and Mr. John Innes as Managing Director. The other members are Major-General L. B. Nicholls, Mr. A. Black, and Mr. C. N. Gallie (the last two named are part-time). One further part-time member may be appointed. Mr. Gallie is General Secretary of the Railway Clerks' Association. The following directors vacated their offices at January 1:—Chairman and Managing Director, Sir Edward Wilshaw; Joint Managing Directors, Mr. Jocelyn Denison-Pender and Mr. R. E. Luff; Directors: Mr. E. G. Brooke, Lord Courtauld-Thomson, Lt.-Colonel Ivor Fraser, Mr. A. H. Ginman, Admiral H. W. Grant, Lord Inverforth, Brigadier H. J. Lenton, Mr. G. Peel, Sir Harry Twyford, Sir John Wardlaw-Milne.

Sir William Valentine Wood, M.Inst.T., President of the Executive, London Midland & Scottish Railway, who has been made a K.B.E. in the New Year Honours List, joined the Accountant's Department, Belfast & Northern Counties Railway, in 1898. That undertaking was acquired by the Midland Railway of England in 1903, and he continued to serve in the Accountant's Department of the Northern Counties Committee of that railway. When the Government took control of the Irish railways in 1917 he was appointed Secretary, and later a member, of the Railway Accountants Committee set up by the Irish Railway Executive Committee. On the formation of the Ministry of Transport in 1919, he was transferred to London as Director of Transport (Accounting), and in 1921 became Accountant to the Ministry. In 1924 he returned to railway service as Assistant to the Accountant-General, L.M.S.R., and was appointed Controller of Costs & Statistics in 1927, which position he vacated in 1930, to become Vice-President, Finance & Service Department. He was created a Knight Bachelor in the Coronation Honours List in May, 1937. Sir William Wood became President of the L.M.S.R. in 1941. On numerous occasions he has given evidence on behalf of all the main-line railway companies before Parliamentary committees and other bodies. He is an authority on railway finance. From 1926 to 1936 he was a member of the Railway Statistics Committee, of which he was Chairman from 1930 onwards. He served as Chairman of the General Managers' Conference, Railway Clearing House, for 1933, for 1937, and for 1945. He has taken a prominent part in the deliberations of the R.E.C., of which he is one of the original members. Sir William Wood was President of the Institute of Transport for 1943-44.

Sir William Wood

President of the Executive, L.M.S.R., who has been made a K.B.E. in the New Year Honours List

We regret to record the death on December 28, at the age of 64, of Mr. W. S. Edwards, M.I.Mech.E., M.I.Loco.E., Managing Director of W. G. Bagnall Limited.

Mr. W. J. Bradnum, Chief Cartage Clerk, Bishopsgate, L.N.E.R., has been appointed Goods Agent, North Woolwich & Silvertown.

At the request of the council of the British Iron & Steel Federation, Mr. Ellis Hunter, President of the B.I.S.F., has agreed to stay in office for another year. He is Deputy-Chairman & Managing Director of Dorman, Long & Co. Ltd..

Sir Alexander Maxwell has accepted the invitation of the President of the Board of Trade to be Chairman of the new organisation to foster and develop the tourist, catering, and holiday services.

Sir William Stanier (formerly Chief Mechanical Engineer, L.M.S.R.) has been appointed a member of the Fire Research Board.

Southern Railway Staff Changes

Chief Accountant's Department

Mr. F. W. Case to be Assistant Audit Accountant.

Chief Civil Engineer's Department

Mr. A. H. Toms, Assistant Divisional Engineer, Southern Division, to be Research Assistant, Waterloo.

Mr. J. Parker, Assistant Divisional Engineer, London West Division, to be Assistant Divisional Engineer, Southern Division.

Mr. R. E. Coward, Assistant Divisional Engineer, Eastern Division, to be Assistant Divisional Engineer, London West Division.

Mr. G. Mann, Assistant to Divisional Engineer, London West Division, to be Assistant Divisional Engineer, Eastern Division.

Mr. A. F. Cameron, Engineering Assistant, Waterloo, to be Assistant to Divisional Engineer, London West Division.

Chief Electrical Engineer's Department

Mr. S. B. Warder, to be Assistant to Chief Electrical Engineer.

Docks & Marine Department

Mr. W. J. Sinclair to be Assistant in charge of Outdoor Work, Docks Engineer's Department.

Stores Department

Mr. J. W. Terry, Indoor Assistant, to be Assistant Stores Superintendent.

Traffic Department

Mr. W. C. Collins, hitherto Traffic Assistant to Divisional Marine Manager, Dover, to be Assistant to Traffic Manager, from September 1, 1946.

(*See article on page* 17)

Mr. G. F. Boxall, Stores Superintendent, Great Western Railway, who retired on January 1, was educated at the Godolphin School, Hammersmith, and at King's College, London, and received his technical training at the Chelsea Polytechnic Institute, and as a pupil at the G.W.R. Paddington generating station. He entered that company's service in 1903, as a shift engineer in the Electrical Department at Paddington, and in 1906 became an Assistant to the Electrical Engineer at Paddington. During the war of 1914-18 Mr. Boxall served with the Royal Naval Division and Royal Engineers (Signals), and attained the rank of Captain. He returned to the Electrical Department, at Paddington, and in 1924, on the absorption of the Electrical Department by the Chief Mechanical Engineer's Department, was transferred to Swindon as an Assistant in the Electric Section. That position he held until his appointment as Assistant Stores Superintendent in 1933, the post he occupied until his promotion as Stores Superintendent in 1936.

Mr. G. F. Boxall

Stores Superintendent, G.W.R., 1936-46

We regret to record the death on December 19, at the age of 78, of Sir Harry Waters, M.R.C.S., L.R.C.P. (London), D.P.H. (Cambridge), Knight of the Order of St. John of Jerusalem, sometime Chief Medical Officer, East Indian Railway.

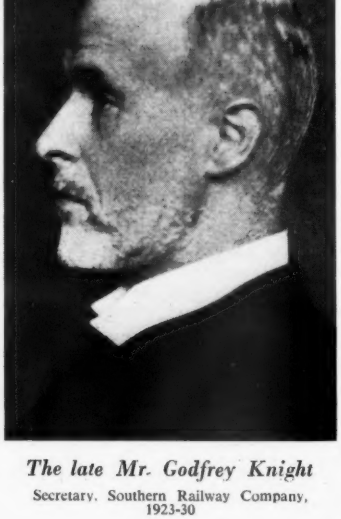
Mr. S. T. Burgoyne, M.V.O., O.B.E., who retired at the end of the year from the position of Passenger Manager, North Eastern Area, L.N.E.R., joined the North Eastern Railway at Hull in 1902, and, after filling various positions in the Goods Manager's and General Manager's Offices at York, joined the Ministry of Munitions as Personal Assistant to Sir Eric Geddes in May, 1915. In August, 1916, he went to France and was made Deputy Assistant Director-General of Transportation with the rank of Captain, R.E. In the next year he transferred to the Admiralty as Private Secretary to the First Lord, with the rank of Commander, R.N.V.R. He was mentioned in despatches in April, 1917, awarded the M.V.O. (fourth class) in June of that year, and the O.B.E. (Military) in August of the same year. After the armistice he joined the staff of the Ministry of Transport, returning to railway service in 1923 to become Industrial Agent, L.N.E.R. In the next year he was appointed Assistant Goods Manager, North Eastern Area, which position he held until his appointment as Manager of the Cheshire Lines Committee in 1929. In 1932 Mr. Burgoyne was appointed Passenger Manager, North Eastern Area, and in 1936 he became Superintendent of that area. He relinquished the latter post for health reasons in 1940, and reverted to that of Passenger Manager for the area.

Mr. Godfrey Knight, whose death was recorded in our issue of December 27 last, was Secretary of the Southern Railway Company from 1923 until his retirement in 1930. Mr. Knight was a solicitor with Bircham & Company, but was engaged on the business of the London & South Western Railway Company alone, and in 1894 he was appointed Assistant Secretary to the latter company, of which he became Secretary in 1898. He held that position until the dissolution of the company on December 31, 1922. On the death early in 1923 of Mr. J. J. Brewer, Mr. Knight was appointed Secretary to the Southern Railway Company.

Mr. L. J. Le Clair, A.G.T.C., M.I.Mech.E., M.I.Loco.E., A.M.I.E.E., M.Inst.T., who retired at the end of the year from the position of Engineer with the Westinghouse Brake & Signal Co. Ltd., was educated at Ayr Academy, and thereafter, as a day student of the Royal Technical College, Glasgow, took the Diploma in Mechanical Engineering. He served his apprenticeship in the locomotive shops of the Caledonian Railway, St. Rollox, and in the drawing office. Mr. Le Clair spent some time as Chief Tester in the Engineer-

Mr. S. T. Burgoyne

Passenger Manager, N.E. Area, L.N.E.R., 1932-36, and 1940-46; Superintendent, N.E. Area, 1936-40



The late Mr. Godfrey Knight

Secretary, Southern Railway Company, 1923-30

Mr. L. J. Le Clair

Engineer, Westinghouse Brake & Signal Co. Ltd., who has retired from that position

ing Department of Guinness' Brewery, Dublin, and thereafter was appointed, first as Works Manager, and afterwards as Assistant General Manager, of the Freinville Works of the French Westinghouse Brake Company of Paris. He returned to England and was for 14 years with G. D. Peters & Co. Ltd., as outside Engineer at its London Office; during the 1914-18 war he was Works Manager of its Slough Works. He then joined the Westinghouse Brake Company in its London Office. He first handled the Vacuum Brake Department, but for many years contacted the numerous customers for tramway, diesel railcar, diesel locomotive and other brake business. During his career Mr. Le Clair has been associated with patents, many of which are in use on railways throughout the world. He has travelled extensively throughout Europe, in India and the U.S.A. His services are being retained by the Westinghouse Brake & Signal Co. Ltd. in a consultative capacity.

L.M.S.R. Staff Changes

Mr. E. S. Hunt, Station Working Assistant to Chief Operating Manager, Watford H.Q., to be District Goods Manager, Broad Street, in place of Mr. A. L. Castleman, retired.

Mr. H. Eccles, District Goods & Passenger Manager, Stoke, succeeding Mr. E. S. Hunt, as Station Working Assistant to Chief Operating Manager, Watford H.Q.

Mr. H. Bullough, Assistant District Goods Manager, Leeds, to be District Goods & Passenger Manager, Stoke.

Mr. T. H. Baker, Head of Section (Merchandise Services), Chief Commercial Manager's Office, Watford H.Q., to be Assistant District Goods Manager, Leeds.

Mr. W. R. Davies, Assistant (Commercial Development), Chief Commercial Manager's Office, Watford H.Q., to be Assistant, Labour & Establishment Office, Watford H.Q.

Mr. A. Jessop, Assistant (Outdoor), Road & Air Transport, Chief Commercial Manager's Office, Watford H.Q., succeeding Mr. W. R. Davies as Assistant (Commercial Development), Chief Commercial Manager's Office, Watford H.Q.

Mr. H. Leach, Chief Clerk, Road & Air Transport, Chief Commercial Manager's Office, Watford H.Q., to be Assistant, Road Transport, Chief Commercial Manager's Office, Watford H.Q.

Mr. R. Ankers, District Controller, Huddersfield, to be Assistant District Operating Manager, Wakefield, in place of Mr. L. Taylor, retiring.

Mr. J. Davidson, District Locomotive Superintendent, Inverness, to be District Locomotive Superintendent, St. Rollox, in place of Mr. E. Glendinning, retiring.

Mr. A. C. Jeffrey, Assistant District Locomotive Superintendent, Carlisle (Kingmoor), succeeding Mr. J. Davidson as District Locomotive Superintendent, Inverness.

Mr. G. Luttrell, Assistant District Locomotive Superintendent, Perth, to be Assistant District Locomotive Superintendent, Carlisle (Kingmoor).

Mr. J. Chalmers, Running Shed Foreman, Motive Power Depot, Inverness, to be Assistant District Locomotive Superintendent, Perth.

Mr. J. S. Tickle, Head Office Inspector (Relief), Office of Divisional Operating Manager, Manchester (located Rochdale), to be Operating Assistant to District Traffic Manager, Swansea (located Abergavenny), in place of Mr. T. P. Bennett, retiring.

Mr. W. G. Walton, Assistant District Controller, Kentish Town, to be Assistant to District Operating Manager, London (Midland).

Mr. J. Napier, Senior Clerk, Advertising Section, Commercial Manager's Office, Glasgow, to be Assistant to Docks & Traffic Superintendent, Grangemouth.

Mr. H. F. Cox, Goods Agent, Salford & Pendleton, to be Goods Agent, Oldham Road, in place of Mr. C. French, retired.

Mr. F. Whitehead, Chief Clerk, Goods Department, Salford, succeeding Mr. H. F. Cox as Goods Agent, Salford & Pendleton.

Mr. E. Roberts, Cartage Agent, District Goods Manager's Office, Liverpool, to be Goods Agent, Waterloo Dock and Great Howard Street, Liverpool, in place of Mr. J. H. Davies, retiring.

Mr. L. F. Murray, Clerk, Transit Section, District Goods Manager's Office, Liverpool, succeeding Mr. E. Roberts as Cartage Agent, District Goods Manager's Office, Liverpool.

Mr. I. Morris, Chief Clerk, Goods Department, Birkenhead, to be Goods Agent, Park Lane, Liverpool, in place of Mr. T. B. Davies, retired.

Mr. J. Aitchison, Assistant Goods Agent, Grangemouth, to be Goods Agent & Harbour Collector, in place of Mr. R. Dowie, retiring.

Mr. H. A. Mugliston, Goods Agent, Evesham, to be Goods Agent, Gloucester, in place of Mr. F. J. Williams, promoted.

Mr. R. J. Griffiths, Goods Agent, Bath, succeeding Mr. H. A. Mugliston as Goods Agent, Evesham.

Mr. W. Craig, Foreman Fitter, Motive Power Depot, Polmadie, to be Assistant District Locomotive Superintendent, Motherwell, in place of Mr. J. Cochrane, detached for special duties.

Mr. Alfred Morris, Assistant to the Chief Hotels Superintendent, retired on December 31.

The President of the Board of Trade has agreed to release Sir Charles Bruce-Gardner from his post as Chief Executive for Industrial Reconversion. Sir Charles Bruce-Gardner is to become Chairman of an important industrial undertaking, but will continue to be available for consultation by the Board of Trade on general industrial matters.

Mr. F. H. Beasant, B.Sc., A.M.I.Mech.E., A.M.I.E.E., A.M.I.Loco.E., hitherto Deputy Manager, has been appointed Manager, Traction Division, Crompton Parkinson Limited, Chelmsford, in succession to Mr. H. G. McClean, who is taking up an important appointment in the U.S.A. Mr. Beasant received his engineering education at the University of Bristol. He was subsequently at Manchester and Sheffield on the staff of the Traction Department, Metropolitan-Vickers Electrical Co. Ltd.; in 1936 he was in Warsaw, engaged in electrification of the Polish State Railways, on behalf of that company. From 1937 to the outbreak of war he was with the L.N.E.R. as Senior Technical Assistant for electric rolling stock, and was mainly concerned with the planning of the rolling stock for the Manchester-Sheffield and Liverpool Street-Shenfield electrification schemes. During part of the war Mr. Beasant was seconded to the Ministry of Supply and was Manager (Engineering) at the R.O.F., Spennymoor, County Durham. In recent months he has been devoting special attention to the newly-developed C.P. diesel-electric shunting locomotive now undergoing final trials.

The New Year Honours List

The following is a first selection of honours of transport and industrial interest from the New Year list:—

Knights Bachelor

Brigadier-General Atwell Charles Baylay, C.B.E., D.S.O., Chairman, Birmingham & District Engineering & Allied Employers' Association.

Dr. William Henry Coates, Ph.D., a Deputy-Chairman, Imperial Chemical Industries Limited. For services to Government departments.

Mr. Harold Leslie Kenward. For services to the Ministry of Supply in connection with the rubber tyre industry. Director, Dunlop Rubber Co. Ltd.

Mr. Charles Percy Lister. For services as Managing Director, United Kingdom Commercial Corporation. Chairman, R. A. Lister & Co. Ltd.

Dr. Ernest Woodhouse Smith, C.B.E., D.Sc., lately President, Institute of Fuel.

K.C.M.G.

Sir John Ballingall Forbes Watson, Director, British Employers' Confederation.

Mr. John Alexander Calder, C.M.G., Senior Crown Agent for the Colonies.

G.B.E. (Civil Division)

Sir William Crawford Currie, lately Director, Liner Division, Ministry of Transport. Chairman & Managing Director, Peninsular & Oriental and British India Steam Navigation Companies. Director, Southern Railway Company.

Sir Frederick Joseph West, K.B.E., M.Inst.C.E., M.I.Mech.E., J.P. For services to the Ministry of Labour & National Service. Chairman, Manchester Ship Canal Company.

C.B.E. (Civil Division)

Mr. William Phillip Allen, General Secretary, Amalgamated Society of Locomotive Engineers & Firemen.

Mr. Reginald Arthur Davis, M.B.E., lately Deputy-Director of Royal Engineer Equipment, Ministry of Supply.

Mr. Charles Mark Jenkin Jones, Divisional General Manager, North Eastern Area, L.N.E.R.

Mr. Stanley Feargus Steward, lately Director-General of Machine Tools, Ministry of Supply.

O.B.E. (Civil Division)

Mr. Sydney William Smart, Superintendent of Operation, Southern Railway.

M.B.E. (Civil Division)

Mr. Horace Moreton, member of the National Executive Committee, National Union of Railwaymen.

Mr. Henry Arthur Turpin, Stationmaster, Cannon Street, Southern Railway.

Mr. Malcolm John Buckett, Traffic Controller, Southampton Docks, Southern Railway. For services to Dominion Ministers and other distinguished visitors from the Dominions, and in connection with the movement of overseas troops.

Mr. C. S. Gill has been re-elected Chairman, and Mr. F. A. Martin has been elected Vice-Chairman, of the British Steel Founders' Association for the coming year.

Mr. R. Weaving has retired from his position as General Manager of the British Electric Transformer Co. Ltd. (in association with Crompton Parkinson Limited). He retains his seat on the board and his services will therefore be available in an advisory capacity. Mr. Weaving is succeeded as General Manager by Mr. E. T. R. Ball, Production Manager since 1939.

Transport Bill Second Reading Debate

Opposition criticism of compensation clauses

In the House of Commons on December 17, the debate on the second reading of the Transport Bill, which had been opened on December 16, was continued (a summary of the debate on December 16 was given in our December 27 issue).

On December 17, the resumed debate was opened by Mr. W. S. Morrison (Cirencester & Tewkesbury—C.), who, in the course of his speech, said that the people they were considering in regard to compensation were those whose property and livelihood the Government was asking them to take from them by force. There were more than a million railway stockholders, and 50,000 road transport operators, who would be directly affected by the Bill, and the number indirectly affected it was not possible to calculate. Every beneficiary of a trust, a pension fund, a superannuation scheme, or the like which held railway stocks was indirectly affected.

The Bank of England had been paid for in one way; Cable & Wireless in another; the coalmines in yet another; and this Bill added to the confusion by containing four different compensatory devices according to whether railways, road transport undertakings, the undertaking of local authorities, or privately-owned railway wagons were being taken. The absence of any coherent principle was, in itself, an alarming prospect, not only to those engaged in the industry directly affected by this Bill, but to those whose industries were the next "cribs" to be "cracked." The present chaos of compensatory devices bred lack of confidence, and inhibited progress and production.

As an instance of lack of intelligible principle, he took the treatment proposed for owners of railway wagons. Under clause 32, they were to get the original cost of the wagons less a heavy depreciation. Besides being unjust, that was quite different from the basis proposed in clause 48 for road vehicles, which was the cost of replacement with adjustments for age and condition of vehicle.

The difference did not arise from any difference in the vehicles themselves, but simply from lack of attention to the problem. The Government had legislated already for the acquisition of railway wagons. During the present year, under the Coal Mines Act a large number of privately-owned railway wagons were required, and by section 13 (4) of that Act, the price was to be the open market value at the date of vesting, as between a willing buyer and a willing seller, as if the Coal Mines Act had not been passed.

Limited Arbitration

Throughout all the methods there was a tendency to shirk arbitration. Where it was allowed, the court of arbitration was severely limited. In the case of the railways there was no arbitration at all.

In other cases of Government acquisition, there had always been some element of independent arbitration. The House had never before been asked in a public Bill to combine the roles of purchaser and valuer. The acquisition of property by the State was no new thing, but hitherto they had contented themselves in Parliament with declaring that it was necessary in the public interest. But they had let the price be fairly determined by some independent person or tribunal. The price of railways was set out in the Bill by reference to known Stock Exchange prices at defined dates. Thus they, the purchasers, were asked, for the first time, to be the valuers of what they were acquiring compulsorily. The other side—the railways—was not to be given a chance to state its own case before an independent or any tribunal.

They were not merely asked to be the valuers themselves, but there was suggested a basis on which they should proceed to that invidious task. That basis was wholly irrational and unjust. It was the listed price of the Stock Exchange of the small number—in proportion to the total holding—of railway securities which had changed hands on six days recently.

National and Unfair Valuation Basis

There was this basis, which they were asked to adopt in their new role as valuers, condemned by the T.U.C., by the Railway Clerks' Association, the Stock Exchange Council, and by, he thought, everyone who had really studied it. He now came to some of the reasons why he considered it a wholly irrational and unfair basis on which to value the railways.

The first was that the proportion of shares which changed hands, to those which did not, was, in the case of those securities, negligible as a pointer to the value of the whole holding. Railway stock was largely held in trusts of one sort or another.

The small parcels of shares which changed hands were often the result of sales forced by some domestic necessity. One could not estimate even the market price of the entire holding by such fortuitous sales. If the Government were to go into the market for the entire holding of those shares, it would soon find the price stiffening abruptly against it. Even on the market price criterion, those transactions during six days were quite unrepresentative of the value of the shares as a whole.

Secondly, the market price of shares which happened to be on issue on any day or series of days was affected by considerations which had nothing to do with the value of the assets or the earning power of the concern. For example, the price and yield of the stock of a municipality would affect the mind of an investor, and the amount he was willing to pay for competing railway stock.

Railway stocks, in that connection, had been surrounded for some time with an atmosphere of adverse speculation due to fears of Government action. But speculation was not valuation of assets. There should be valuation of the railways' assets and arbitration before an independent tribunal.

There was another factor which affected the price of shares so as to make it no criterion of the real value of the concern. That was the financial policy of the directors of a company. The extent to which they distributed the profits of the company in dividends increased the yield of the shares, and, therefore, their price. If they were prudent, and ploughed back into re-equipment the bulk of their profits, their shares would have a smaller yield and a lower price in the market than if they squandered their profits on high dividends. It was precisely there that this novel and illusory method of valuing business was so harmful to the public interest at this time.

Having valued the railways, they had to pay for them. The dispossessed were not to get cash, but stock, to be called British Transport Stock, to be issued at some undisclosed future date.

He assumed that the yield of that stock would be 2½ per cent. In 1945 the total yield of the four main-line railways in interest and dividends had been £41,499,262. The annual interest on the British Transport Stock which they would receive would be £22,694,593. The recipients, then, would lose of their income, on the whole, £18,804,669. There were, of course, different reductions in different stocks, which, he thought unjust in itself, but the average overall reduction of income for the holders of these stocks—trusted stocks, a great number of them—was 45.3 per cent., very nearly half the income on the whole. All the railway shareholders would suffer, but it was a further vice of this method of compensation that they did not suffer equally. By this "hit or miss" method of valuation, grave inequalities were introduced as between the different classes of stockholders.

Chancellor of the Exchequer's Speech

Dr. H. Dalton (Chancellor of the Exchequer) in the course of his speech, said it was true that, from time to time, different bases of compensation had been adopted when private property had been taken into public ownership. That had been true even before this Government was returned. If they looked back to various measures of socialisation proposed by the Conservative Party, no one single principle had been consistently applied. He, too, had sought to apply common sense and practical considerations. The only element in common in all cases was, that what was done should be broadly reasonable and fair and in the public interest. They were all agreed on that. When this plan had been first announced, there had been a chorus of approval in the Press for the decision to base compensation for the railways on market values.

During the war, the Government had paid the four big railways a fixed annual rental of £38 millions, and taken the net earnings into the Exchequer; and on that basis the net revenue of the railways had risen to £40 or £41 millions. That, therefore, was about what was thought possible in time of war—£38 millions or £40 millions—but those wartime conditions would not continue. Indeed, already there had been a rapid deterioration, because no longer was there the great quantity of uniformed personnel to be carried on the railways, or the same quantity of munitions being carried under conditions of high pressure. The wartime rental was too high for peace.

What would happen if they did not nationalise the railways, and if they had in power a Government which really believed in decontrol, which was prepared to open all the windows for the full blast of competition to play on the sheltered railway system—sheltered for many years by legislative and administrative action—and let it really feel the full blast of competition from road transport? Within a few years the whole railway system would be totally bankrupt.

Even if there were the same degree of limitation imposed on road transport in the interests of rail as had been done before the war, still they could not hope that the railways would maintain those revenues. It was contrary to all reasonable expectations. Let them look to the railway system now. It was in very poor shape. Partly, that was due to the strain of six years of war; partly, but not wholly. Those dingy railway stations, those miserable, unprepossessing restaurants, all the apparatus for sleeping and eating, made one ashamed as an Englishman when one

was travelling abroad and saw how well the thing was done in Continental Europe, Western Europe, in Sweden and France. Still more did they feel that if they went to America and Canada. That was one reason why the tourist traffic was not so easily attracted here. Our permanent way was badly worn. The rolling stock was in a state of great dilapidation. The railway stations and their equipment were a disgrace to the country. It could not be supposed that the Stock Exchange was seriously undervaluing those things at present terms.

Let them consider what it was proposed should be done. It was proposed to issue Transport Stock based on the Stock Exchange valuation. It would be a dated stock. The exact terms on which it would be issued depended on the conditions in the market when the issue was made.

Drop in Income

For the purpose of calculation, it was assumed that it would be a 2½ per cent. stock issued at par. On that basis, Mr. W. S. Morrison was completely correct. The stockholders of the big four railways —he would deal with the L.P.T.B. separately later—would have a total drop in income, on certain assumptions; the drop would be from £40 million to £22¾ million a year. The position measured two things; it measured a great advantage which the Minister would have when he was dealing with the plans to nationalise the railway system; it meant that he would have to pay out to the holders of the new stock £17¼ million a year less than was now being paid out to railway stockholders. That would be a valuable element in his balance sheet. That sum would be available for the improvement of the service to give them a better and more efficient transport system, and would be available according to a number of possible decisions which the Minister might take.

Why would there be that drop? Because risk was being eliminated from the whole mass of that transport stock. There was an estimated income of £22¾ million without risk, as compared with £40 million per annum for a collection of stocks, many of which were highly speculative.

It was sometimes argued that all those railway securities were owned by trustees, most of whom were poor people. It would mean a very elaborate piece of statistical research to get an exact answer to the question he had been asking his officials to investigate, namely, "what proportion of that total was held by trustees, as distinct from that held by ordinary private individuals, holding without the limitations of any trust?" But he could say that of the total stocks, some 29 per cent., by present values, were trustee securities in England and Wales.

All those people were to get something under their proposals, even the unfortunate people who had invested in London & North Eastern Railway Company deferred ordinary stock 20 years ago, and who had never had a penny dividend from that day to this. Those were among the railway stocks they were taking over. The L.N.E.R. preferred ordinary stocks had paid nothing since 1931. The London Midland & Scottish ordinary shares had passed their dividend for a number of years from 1932 to 1935. They had paid nothing in 1938, and in between they paid 1½ per cent. and 1¼ per cent., a very poor return to the widows who had invested in them some years ago. Let them take Southern deferred ordinary stock. The Southern had been a good deal better, but even they had missed their dividend several times, for the four years running from 1931 to 1935, and again in 1938, and they had never paid more than 2 per cent. since 1929.

The truth was, in the jargon of the City, it was much too good a stock for the taste of some of those who received it. It would bring in assured minimum income, whereas some would prefer greater risk and prospect of something more. But they were not debarred from making their choice effective, because the stock would be freely negotiable. Trustees might buy and sell with complete freedom within the trustee list itself, and also within any further latitude of investment given to them by the particular trust.

Let him say a word or two about the London Passenger Transport Board's guaranteed stock. Much had been made of that case. It was said that in bringing that stock within the scheme on the same basis as other transport stock, the Government had acted with special turpitude.

He had given an answer the other day which had been carefully considered, and about which he had taken the best legal advice. Summarising that answer, it had been that the guarantee of interest was a guarantee against default by the London Passenger Transport Board itself. Had the Board defaulted in respect of the interest on the stock, it would have been the plain duty of the Government to make good that default. Had the date been reached without any such change as they were introducing now, at which the principal was due to be paid, then it would also have been the duty of the Government to make that good, had the Board failed. But the Board was passing out of existence; its assets were being transferred to the new nationalised body.

He now passed to the second branch of his defence of the arrangement, which was that those who held the 3 per cent. London Passenger Transport Board's stock were being well and justly treated under the terms of acquisition. Those familiar with the arithmetic of the Stock Exchange would be able to work out the yield on redemption which could be obtained from the new arrangement, and they would find—he had had the figures worked out with as much exactitude as he could command, and he would give the figures—that the holders of the stock were being well treated, not only legally, but equitably.

The stocks would be taken over at 107⅞ that being the market value on the basis of the Bill. Assuming that the market was valuing the guaranteed stock against a background of a 2½ per cent. rate on direct Government securities, the comparative yield on redemption of the two stocks would be as follows. When allowance had been made for the loss of capital that a holder of £100 of 3 per cent. guaranteed stock, bought at 107⅞, would suffer when the stock was redeemed in 1967, the yield to redemption on that would be £2 9s. 9d. On the other hand, the yield on 107⅛ of transport stock, assuming 2½ per cent. interest, was £2 13s. 11d. as against £2 9s. 9d. He did not know why the Stock Exchange Council did not work that out, and tell the people of that in its pretentious manifesto.

Behind the whole of the difficulty, as some saw it, of reduced income from that guaranteed stock, lay the fact of the cheap-money policy. The fact that national credit had improved since the last General Election, and the fact, of course, that the Government could now borrow more cheaply, both on long term and short term, had had a bearing on it.

He wanted to justify, particularly, the date selected for taking the market prices. He thought he could reveal, without impropriety, to the House that when they had considered that, the first inclination, having decided the principle of market value, had been to choose the pre-Election period when a lot of people had thought that there would not be a Labour Government, and some of them were not quite sure how big its majority would be. At any rate, there has been no reason to suppose that the breaking up of the railway companies had entered into anybody's mental picture.

They had thought at the beginning that it would be fair to all concerned to take the six months prior to the Election to establish what those prices were to be. When the Election was over, gradually the national credit had improved, and, as prices rose and everything got better, they did not want to be unfair to those people. They said: "Let us see whether those poor people would do better if we took the period just before the King's Speech in which the Socialist measure was announced and let us give them whichever is best."

Alternative Suggestions

Alternative suggestions had been made, and he wished to dispose of a few of those, or at any rate to put arguments against them. As contrasted with the market value, one was the maintenance of existing income, and the other was the net maintainable revenue multiplied by a number of years' purchase. The existing income basis had been the method adopted in the case of the Bank of England, but he was as specific as words could be in moving the Second Reading of the Bank of England Bill on October 29, 1945, when he had said:—

"I desire to emphasise that, though these terms of compensation . . . are fair and appropriate in this particular case, they are not to be regarded as a precedent for any subsequent measure of nationalisation. The terms of compensation must vary from one instance to another, according to the merits of each case."

He had gone on to say:

"From the financial point of view"—and I invite particular attention to this—"—the Bank of England is by far the best of all the propositions which we intend to nationalise in this Parliament. Some of the others are a bit depreciated; they show marks of private *un*enterprise."—[Official Report, October 29, 1945; vol. 415, col. 47 and 48.]

The Bank of England had been a very well-kept concern and its stock substantially a gilt-edged security holding. It was a different kettle of fish compared with the railways. He did not know whether Mr. W. S. Morrison would propose that they should compensate on the basis of sustaining income, as distinct from the market value of the capital of the shareholders.

Mr. W. S. Morrison: I think a fair valuation for the purpose of compensation for the State acquisition of property should have regard to the real value of the assets being purchased. There are several well-known methods of doing that, such as by the obtainable revenue, or the valuation of the actual cost of the property, and whichever is appropriate in the case of the railways should be followed.

Dr. Dalton said he had understood that, but he wanted the views of Mr. Morrison as to the general proposal made in some

quarters. It would mean that 76 per cent. more than the Stock Exchange prices in the Bill would have to be paid for sustaining the income of those railway shares. It would mean that £1,600 million would have to be paid instead of the £900 million that they proposed, in round figures, to pay.

That was for the "big four" railways alone, and that was substantially more than the total capital expenditure undertaken on the railways. The estimate of *The Economist* on November 23 was just under £1,200 million. He did not think that any serious student of the factual figures could maintain that they should treat the railways as well as the Bank of England stockholders.

Net Maintainable Revenue

A word, then, on the other alternative, namely, the net maintainable revenue. They had adopted that in the cases of coal, and of Cable & Wireless Limited, but in practice it was almost impossible to apply it to the railways, having regard to the character of the assets and other considerations. He had already touched on the difficulty of defining the word "maintainability" in railways. Assumptions would have to be made in regard to the policy which would be adopted other than nationalisation. How far were they going to open the window of competition with the roads? He had given reasons why they would not open the window completely. If they did, the railways would be completely blown away. If it were only opened a little way, they would be blown sideways. They had, therefore, to have a precise definition of what was the alternative to nationalisation, and if it was very free competition—well, maintainability descended rapidly towards zero.

It was difficult when one came down to such things as permanent ways, stations, and so on, which had baffled all sorts of attempts, including those of local rating authorities, for many years. The railways did stand in a class apart, and by their very nature were not suitable either for the assessment of a net maintainable revenue, in default of nationalisation, or for a valuation of that great miscellany of assets. He would add the one further argument that in any case, if that could be done, it would take a long time and leave a lengthy period of uncertainty as to what was going to happen, which the stockholders would not want. In addition, it would require a very large number of professional and technical staffs; scores of technicians would have to be taken over from other work to be employed on that rather artificial and speculative valuation, and very likely at the end of the day it would be put where they were putting it now without very much difference.

Let him try to console anybody who thought the railway stockholders were being ill-treated, by putting the compensation terms in another form. Let them take the total compensation contemplated for the railways under the present Bill—£908 million. If the net maintainable revenue were put at £40 million—that would represent 22.7 years' purchase. That would mean that the risk on all the railway's capital on that basis would be measured by an interest rate of about 4½ per cent., including all the speculative junior stocks, and if they were to break that up, it meant that—on the basis of 22.7 years' purchase—on the senior half of the capital, they should put the yield at 3 per cent., which was not much above the Government gilt-edged level, and a risk of 6 per cent. on the junior half.

If they took the average net railway revenue of 1935-37, it would be found that the compensation they proposed represented about 25 years' purchase.

Compensation for Road Haulage

The terms of compensation for road haulage were really very equitable. What was proposed was that compensation should consist of two parts: first, replacement value at the date of the transfer, less depreciation on a certain scale, *plus* between two and five times the annual net profit lost to the undertaking. That was really quite good, because many such a concern would have a depreciation fund set aside which would be invested and bring in much more than 2½ per cent. What they got was replacement value less depreciation—which a worthwhile concern would have already provided for—*plus* between two and five times the actual net profit lost.

With regard to the other classes, the local authority undertakings and privately-owned wagons, he would merely say that in each case regard was had to the particular circumstances. For the local authorities, the basis was, if clause 27 be examined, that the Transport Commission assumed liability for the interest and sinking fund charges for the net debt—whatever was left outstanding.

The simple justification for the net debt basis there was that they had one public authority taking over from another. That had nothing to do with private concerns, but concerned a local authority whose assets were being transferred to another public authority.

With regard to privately-owned wagons other than those owned by the railway companies, under clause 32 the compensation for pre-war wagons was to be the 1939 cost, less depreciation as laid down in the clause.

From the compensation point of view, the present Bill far transcended any similar measure they had yet had in this Parliament. In introducing it, they were carrying out the pledges made to the electors.

Financial Sacrifice to Efficiency

Sir Ralph Glyn (Abingdon—C.), in the course of his speech, said that the forgoing of dividends by the ordinary shareholders and some of the preference shareholders had been in order that the directors of the railways could see that the tracks and the equipment generally were kept in proper condition. If the shareholders had not made that sacrifice—rather, it was made for them—it would not have been possible for the railways to play the part they did in helping to win the war.

He was a director of a railway. He had always felt very proud to belong to the railway service of this country.

He begged the Government to realise that it would give far more satisfaction if the matter could be referred to arbitration, as had been done in the 1921 Act, quite simply and without any great delay to selected dates. There was no doubt that the proposals of H.M. Government were not between a willing seller and a willing buyer. It was *force majeure*. It was seizing something.

It was clear that the Stock Exchange could not be looked on as the best means of assessing the assets and everything else of the railway. On the whole, the railways, since the 1921 Act, had been able to manage their affairs well. They had put by reserves and were quite able now to carry out the programme they wanted for new rolling stock, rails, sleepers, and so on, but they could not get the articles.

They ought to be proud of the fact that it was British engineers and British courage which had made the railway systems of this country and of Europe.

Mr. J. A. Sparks (Acton—Lab.): What about the railwaymen? Did not they have anything to do with it?

Sir Ralph Glyn said that he had been coming to that. If Mr. Sparks had been longer in the House he would know that all the years during which he (Sir Ralph Glyn) had to do with railway negotiations, he had had the happiest relations with his honourable friends. He had never yet known any railway union representative to go back on what he had said to him or to any of the officers. He did not believe any of them had any doubt about the officers of the railways, or about those of them who were in the House when negotiations took place, and he regretted that Mr. Sparks should not be one of the first to stand up for what he believed the finest labour negotiating machinery that existed.

He was sure the House would permit him to say there was one officer of the British railways, Mr. Darbyshire, who had been one of the greatest friends that the trades union movement had had, and one in whom they had the utmost confidence. He hoped that at some juncture the Minister might show that the railwaymen themselves were to have as good a system for negotiations as they had now when the State was their employer and when there was no appeal from the management.

Any good railwayman knew that all the responsible leaders of the trades unions knew what could and could not be done. Their greatest dangers were those people who split away from the union to form another one. No railway, no great industrial organisation, could function unless it recognised the great unions that belonged to the industry and those associated with it. But where the difficulty arose was that, through political pressure, more and more was squeezed out for the benefit of individuals who, in their heart of hearts, knew the industry could not afford it. It was by the joint effort of management and labour that service had been rendered in the past.

Nobody had mentioned that during the war they had been under Government control and the Treasury had netted something like £100 million over and above the rental the railways had obtained. That ought to be borne in mind, because that never had gone to the benefit of the shareholders, but had been put aside, and had gone back into the maw of the Treasury.

Mr. A. J. Champion (Derby, Southern—Lab.) said that the growth of railways undoubtedly had been marred by some of the worst features of an expanding capitalist system, and there had gone into railway capital much money which, in fact, was represented by no assets. They had in this country the highest capitalisation per route-mile in the world.

Sir Hugh O'Neill (Antrim—C.) said that in every speech on the question of Stock Exchange values as the proper basis for compensation, they had been told about the prices during the last four, five, or, at most, ten years. People had forgotten to look back to what prices were, say, ten years before the war. In his view, what had kept railway securities grossly depressed—he was talking now about the junior securities—had been competition of road transport and fear of nationalisation.

It had been said that, if a fair price in cash was paid for compensation, one was

not concerned with the subsequent income of the recipients. But there was no provision in the Bill for payment in cash. The Government stock which was to be issued was to be redeemable stock, a small grain of comfort, but the Chancellor had not said what the terms of redemption were to be, or for how long that stock was to run before redemption.

Again, it was said one could not burden the nationalised railways with interest charges they would not be able to earn. Why would they not be able to earn roughly the rental now being paid under the Control Agreement? Surely, the whole argument for nationalisation was that it would bring much greater efficiency?

Another Method of Compensation

He suggested a fourth method of compensation which he had not yet seen discussed anwyhere, at any rate in detail. That was a method of compensation by means of a terminable annuity. It had been calculated that, with an annual payment spread over 40 years, of an amount roughly equivalent to the rental now being paid to the railways under the control agreement, a reduced, but reasonable income would be available to the stockholders, and at the end of the 40-year period, by means of the sinking fund included in the annunity, the stock created would be redeemed and the railways would belong to the State, free from all obligations and free of all charges, except those incurred for future development.

Mr. Douglas Jay (Battersea, North—Lab.) said they on his side of the House held the basic conviction that great public services and great concentrations of economic power like the transport services of this country should be not in private hands, but in the hands of an authority responsible to a Minister who, in turn, was responsible to Parliament. They held that that was the only democratic system.

He did think that, in the final case of the railway debentures which were still trustee securities, there was some element of difficulty and hardship because of the very narrow range of stocks in which one could reinvest. But there the solution lay, not in any alteration of the compensation price, but, in his opinion, in some widening of the range of trustee stock, and he had been glad to hear the Chancellor of the Exchequer say in the House that he was prepared to consider some widening of that kind. If that were done, it would go far to remove the only element of legitimate grievance in the field of compensation.

Mr. David Renton (Huntingdon—Lib. Nat.) said that before the Minister's scheme was accepted, he thought they had to decide, also, whether it would be executed fairly and justly, with justice to those concerned, and with the minimum of interference in the economic and industrial life of the country. The burden of satisfying the House as to those issues lay on the Minister; and because they felt he had not discharged that burden, his honourable friends and himself intended to vote against it.

Mr. J. Harrison (Nottingham, East—Lab.) said he had spent 32 years in the transport industry as an employee of the L.M.S.R. Over that 32 years he had seen the most efficient railway managements struggling regularly to try and obtain the necessary capital with which to bring their industry into line with modern requirements. In its plans for economic rehabilitation and expansion the Government had no option but to nationalise.

Mr. E. McN. Cooper-Key (Hastings—C.) said he believed the country would examine any scheme, whether for private enterprise or State control, provided it indicated some advantage to the consumer and some positive proof of efficiency. The present Bill showed nothing except a declaration of intention.

Mr. Percy Morris (Swansea, West—Lab.) said the Bill had a splendid objective; it was necessary in the national interest, and would have the support of the public. It had the unanimous support of thousands of railway workers, who would feel that they had a much greater incentive to work if there was a better prospect of improved efficiency and a conviction that whatever profit was derived from the industry would be used for the public good. They recognised that it was a long-term policy.

Mr. S. W. Digby (Dorset, Western—C.) said there would be a serious lack of competition, and that was almost certain to lead to slackness and high fares, unless the greatest possible protection was given to transport users.

Mr. Ralph Assheton (City of London—C.) said he was a railway director. Although he proposed to speak solely on the question of compensation, he did not want anyone to think that the transport interests would agree with nationalisation in any circumstances. They objected to nationalisation, quite apart from the question of compensation.

The Opposition regarded the compensation as unjust, inadequate, and arrived at by wrong methods. The Chancellor of the Exchequer had quoted from one or two of the newspapers, and he must have had considerable difficulty in finding his quotations, because the vast bulk of newspapers in the last few weeks had been strongly critical, although he appreciated that he had been referring to the first day the scheme was announced.

Dr. Dalton: I quoted statements from the newspapers, including a number of Conservative newspapers, on the first day after the announcement of the scheme, and before they had been bedevilled by organisation, education, and propaganda.

Mr. Assheton said that Dr. Dalton had looked at the newspapers the morning after his Press conference, and had been satisfied, but since then a lot of water had flowed under the bridges. If he might quote from *The Times* of December 16, a respectable newspaper not on the Opposition's side, it had said: "The basis of purchase of the railways appears extremely unfair." *The Times* also had said: "The more it is examined, the less equitable it appears"; and, further: "The most singular feature of the compensation clauses of the Transport Bill is that stockholders have no right of appeal against them other than to Parliament. There the Government will be judge in its own case."

He suggested that compensation, to be fair, should put those being compensated, as far as possible, in the same position financially as they were today.

Stock Exchange Quotations

The Stock Exchange quotations were not related directly to the value of the company's assets or to its earning capacity, and, consequently, for whatever days they were taken, could not form a fair and equitable basis for compensation. The Stock Exchange did not determine the prices at which stocks and shares were sold. Fear of nationalisation and of unfair treatment had undoubtedly resulted in Stock Exchange prices being lower than they otherwise would be.

The Church of England would lose more than £200,000 per year. Then there were pension schemes in numerous businesses. There were insurance companies which had invested their money on the assumption that those debenture stocks were to receive a perpetual interest, and their actuarial valuations had been based on that. The present proposals would upset all the actuarial payments, and every pension and superannuation fund in the country. There were innumerable small investors who had put their money into stocks, many of which were trustee securities, and the Chancellor did not even indicate that he was willing to consider the possibility of changing the Trustee Act.

They had been told that the holders would get British Government security. But they did not want it. As British Government security, they were going to get guaranteed stock, and he hoped the guarantee on it would be better than the guarantee on the L.P.T.B. 3 per cent. guaranteed stock 1967-72.

He warned the Chancellor that, if he was going to put out a thousand million pounds worth of guaranteed stock, and did not take care to implement the guarantee on that stock, he was not likely to keep the trust of the public which every Chancellor of the Exchequer of this country should have.

The Chancellor had said that, but for the present Bill, the railway companies and the stockholders would lose their money. Every year before the recent war the railways had earned many millions more than the Government was now prepared to pay the stockholders. During the war, the Government had taken control and taken away from the railways earnings of more than £200 million. He was not complaining of that now. He was saying that during the war the railways had earned £200 million in addition to the return which the stockholders had got as a fixed annual sum. After the war, if anything like justice was done to ensure fair play between road and railways, they should be able to continue to earn a fair return on the capital invested, and, unless the Government's policy of full employment was all "ballyhoo" and an utter failure, the railways looked like having more traffic than they could easily carry.

The capital assets of the railway companies were estimated now at something like £2,000 million for replacement purposes. The Chancellor had said the railways' permanent way had been in bad condition before the war. That was quite untrue. The permanent way had been finely maintained in the years before the war, and they had done wonderful work on it during the war. It would be getting better now if they could get timber for sleepers. For the railways' assets, which, as he said, would cost £2,000 million to replace, the Government was offering £900 million, and he could not think that assets which had been able to earn as much as those had over the last 20 years could, with the prospects before them, possibly be valued at as low a figure as that. What was the Chancellor going to do with his ill-gotten gains? He had told them he was going to make a profit of £17½ millions.

Dr. Dalton: I said that the Minister of Transport would make a profit.

Mr. Assheton said he would accept that figure for the purpose of the argument. Was the Chancellor going to reduce the cost of transport to the public? He had not said anything about that, and he felt sure he would have done so, had it been in his mind. He had talked of building some better stations and restaurants; those were desirable things in their right

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place and in their right priority, but it was much more important to get the permanent way and the rolling stock into proper condition.

He thought it was the essence of British justice that the matter should go to an impartial tribunal. Were undertakings in the future to be taken over at any price which the Government felt it could afford or was inclined to pay? Such a practice would undermine the whole confidence in our financial affairs on which industry depended so much, and confidence in our financial structure. The Government was asking the House to approve a measure which they on his side said had in it a very serious element of confiscation, and confiscation was a long word, but what it meant was theft by the State.

Parliamentary Secretary's Speech

Mr. G. R. Strauss (Parliamentary Secretary to the Ministry of Transport), speaking during the resumed debate on December 18, said that there were, as far as he knew, only five possibilities: first, that there should be no amending legislation at all; second, there should be more competition in the transport industry; third, a permanent subsidy to the railways; fourth, some form of co-ordination without nationalisation; and, fifth, nationalisation.

He thought that no one connected with the industry, particularly anyone in the railways who knew the difficulties and the near chaos that had come about in the 1930s, would support the suggestion of doing nothing and letting the industry sink or swim.

More competition, he submitted, would only bring about a renewal of the conflicts which they had had in the 'thirties, but worse.

The third possibility was a permanent subsidy to the railways. The L.N.E.R. had recently put forward a scheme along those lines, disguised in the form of the Government taking over the track, and letting it back to the railways at a profit. Incidentally, that scheme had not been supported by the other railway companies.

The fourth possibility was suggested as the only real competitor to their proposal. Its advocates accepted the need for co-ordination, but maintained that that could be achieved by some internal arrangement without all the disturbance involved in nationalisation. He thought he had stated their case fairly. Those who took that view maintained that either the co-ordination proposals of the Transport Advisory Council, in 1939, or those recently put forward under the road-rail agreement, would be a solution of the problem. The railways, without any legislative change and left to their own resources, had not been able to compete successfully with road haulage operators in the past, and would not be able to do so in the future. That competition had become increasingly serious, and, by 1938, the stability of the railways had become so seriously undermined that they had launched their nation-wide "square deal" campaign. The Government of the day had referred the whole question to the Transport Advisory Council for report. That Council had made certain recommendations designed to harmonise the charges of road and rail. They had been, in fact, a series of precarious compromises between vested interests. They had been capable of many interpretations, but almost certainly incapable of effective implementation.

Recently, however, a further attempt had been made by the leaders of the road and rail services to devise a formula to relate their rates to each other in such a way that both should be able to pay their way. Their solution had been, in fact, an elaboration of the earlier Transport Advisory Council's scheme, and equally unsound and impracticable.

That left them only with the solution in the Bill—the obvious one, and the one which, with greater or lesser emphasis, had been endorsed by every commission of inquiry which had considered the problem, namely, the complete unification of our transport services.

The Commission would be the controlling body, the policy-making body, charged with bringing about integration. It had been said that, in practice, it would be the railway and other executives, with their separate entities and interests, which would be in control of the situation. But the executives were going to be the agents of the Commission, not independent separate bodies. The Commission would have to delegate to the executives certain managerial functions in a document, to be approved by the Minister, designed to ensure that, by the setting up of the appropriate machinery and whatever else was necessary, the objective of integration would be fully implemented.

The Executives would consist of men who had had wide experience and shown capacity in transport, industrial, commercial, or financial matters, in administration, or in the organisation of the workers. Of course, there would be men on the railway executives with railway experience, and, on the road executives, with experience in road transport, but on each executive there would be men with general business experience, and there would be men on each executive, in all probability, with experience in branches of transport other than that with which their particular executive was dealing.

The members of the executives were to be appointed jointly by the Minister and the Commission in consultation, but the Minister was taking personal responsibility to the House for the appointments. They would be made only after the fullest consultation with the Commission. Although, later on, it was possible that a regional organisational scheme might be developed, it was inevitable that, in the first place, the structure should be one of executives established at the centre to take over managerial responsibility for each separate service.

It was not their intention that there should be any interference at all in the ordinary day-to-day duties of management of the executives.

The Government was satisfied that the principles of the Bill were correct. But what the exact charges structure was to be was something which should be worked out by the best people who could technically carry out that task. Obviously, the people who had that task were the Commission, who would be able to get what experts they desired and would then place before the Government and industry a charges structure which might be subject to criticism and objection, and which, only after all that had been gone through, could be adopted. He could not say what that new charges system was likely to be. He could only reasonably forecast that it would not be based, like all recent explorations into the problem, on the need for, somehow, relating road and rail charges on a profit basis, but on principles best likely to serve the national interest.

Apart from the arrears of maintenance, for which sums had already been set aside under the Railway Control Agreement, a vast expenditure was required to overtake the accumulated obsolescence of the railways, and for which the railway companies, on their own statements, which he could quote, had no resources. That obsolescence occurred in relation to tracks, workshops, and stations. He himself would like to emphasise the dingy and forbidding atmosphere of the waiting rooms; also the lack of any proper amenities for the railway staffs.

But heavier still would be the cost of the extensions and improvements, including possibly the electrification of the railway system. In and around London alone, it was reckoned that at least £400 millions would have to be spent. Obviously, most of that ought not be spent for some time; but a strong case had been put up for the early spending of about £200 million in improvements to conform with the planning arrangements put forward.

In regard to the L.M.S.R. Northern Counties Committee, that would be a matter for discussion between the Minister or the Commission and the Northern Ireland Government.

They were confident that the Commission would be able to serve the public better than it had ever been served in the past in the way of transport, and at substantially less real cost to the nation than was possible under the present system.

Proof of Efficiency

Sir John Anderson (Scottish Universities—Nat.) said he was a railway director and had been Chairman of the Port of London Authority, but in what he had to say, he would not be influenced in any degree by personal interests.

In general, he considered competitive private enterprise the appropriate technique in a free community, but he did agree with an observation of the Lord President of the Council that the onus rested on those who sought to establish a case for national ownership, and that the criterion should be the public interest.

If the railways had not been thoroughly efficient they could not possibly have met the demands on them during the war. The country was under a great debt to the railways for the services they had then rendered. Whatever the case might be for a change in the system of ownership, it could not be established on the score of inefficiency.

It was not the case that the road-rail agreement, recently arrived at, had been put forward as an alternative to nationalisation. It had been, in fact, the outcome of long deliberations by persons connected with road and rail transport, who should be presumed to know their business at least as well as Members opposite. The purposes of the road-rail agreement, under which competition could continue, was to put the railways and the road services on a comparable basis. That agreement should be given a fair trial.

If road services were to be regarded by themselves, the case for nationalisation seemed to him hardly arguable; but if the nationalisation of the road services were to be regarded as merely consequential on the nationalisation of the railways, that seemed a very strong argument against the nationalisation of the railways, if the case against had not already been fully established.

The scheme in the Bill was bad. First, no case had been made out; second, the methods and machinery proposed were unsuitable.

Finally, what a time to choose for the

scheme. If it were the best scheme in the world—and it certainly was not—could they afford either the diversion of energy or the shock to confidence involved in bringing it into operation? The task was tremendous, and it was going to fall on the shoulders of people who had many more urgent things to do. No single body of traders in the country, so far as he knew, had expressed itself in favour. Before such a scheme had been introduced, there should have been an inquiry covering the whole range of the proposals of the Government and taking account of conditions as they were now, and not as they had been 10 or 15 years ago.

Mr. G. H. R. Rogers (Kensington North—Lab.) said we had in this country a perfect example of the way in which co-ordination and unification of a public service could benefit the people in the London Passenger Transport Board, and that excellent example had been ignored by the Opposition.

Sir Arthur Salter (Oxford University—Ind.) said that for 20 years he had been agitating for the socialisation of monopoly public utilities, and he had advocated an effective, and, if necessary, enforced, co-ordination of road and railway. If the Government were to produce a Bill designed—and well designed—to secure the economies of co-ordination, while at the same time showing that it was clearly trying consistently as to its main purpose to preserve as much as possible of the freedom of industry and of the trader to use his own wagons, as an incentive to efficiency and a barometer and test of efficiency, he would certainly support it. But this was not a Bill of that kind.

Road-Rail Conference Recommendations

In its report, the Road-Rail Conference had recommended, first, that there should be a scientific inquiry into the most economic form of transport for each class of goods for each length of journey; second, that a fair basis of competition having been established, both railways and road hauliers should each be subjected to the competition of the other; third, that the ancillary users (that was, the ordinary industrialist and trader, the "C" licence man) should remain free to use as many motor vehicles as he found his business required. It had gone on to say:—

"This freedom is the best security that the economic enterprise of the country will have the most convenient and cheapest form of transport that is practicable. With this safety valve we need not fear that any form of semi-monopoly which may develop by a large-scale organisation of the haulier industry, or close relations between that industry and the railways, will be against the public interest."

It had recommended that both those great services should have a stimulus to

"afford common carrier services which, with the advantage of the economies and the combined facilities so possible, would make it worth while for the trader and industrialist to resort more to them and less to the employment of vehicles of their own. The right of the ancillary user to employ his own transport would be a more effective safeguard than any possible system of public supervision against the dangers of abuse in large-scale organisations."

That recommendation was remarkable, for the reason that the conference had consisted of the four general managers of the great railway companies and four men of as nearly as possible corresponding authority from the road hauliers. The whole of their business interest and bias would have been in the direction of the suppression or restriction of the "C" licence holders, but they had sufficient confidence in their efficiency, they were sufficiently conscious of the great dangers of a great monopoly exempted from the incentive and test of competition, and they were sufficiently public-spirited to make the recommendation he had quoted. It was regrettable that the Minister of Transport had not a similar and equal confidence in the ability of his proposed organisation to make, on its own merits, its transport so attractive that traders would choose it instead of running their own wagons.

A State Monopoly

Mr. Peter Thorneycroft (Monmouth—C.) said the Bill set up a great State monopoly of transport. He was against a monopoly of transport. He regarded it as likely to injure the interests of the consumers and users of transport. It is certain it would hamper and restrict the future progress and development of the transport industry. He was equally opposed to a public or a private monopoly of transport. He did not share the rather facile optimism of Members opposite, who thought that just by taking a private monopoly and turning it into a public monopoly it suddenly assumed such virtues as it never had possessed before.

It was time someone on the Government benches said what kind of problem it was they were seeking to solve, what great evil they were seeking to remove. Had the users of transport throughout the country suddenly come forward in deputations and begged the Government to remove some tolerable hardship? What relevance had the Bill to any of the real problems which confronted the Government at the present time?

The problem was how to expand production, how to get our export trade going, how to cheapen transport costs, and so what did this Bill do about it? What did it do about cheapening transport costs? The Minister and the Front Bench speakers had been pressed to say on what basis their rate structure was to be put forward; not one had produced an answer. It was no good saying that an inquiry was wanted for that matter and for nothing else. It was the key matter of the Bill.

Let them stop this chant about co-ordination, integration, and unification. It had become practically meaningless. The key to the transport policy did not depend on some trick of organisation of the transport industry, but on expanding production. If there were goods and passengers to be carried, then transport was prosperous.

If the nationalised coal mines were producing coal, if the Minister of Health was building houses, and if the Chancellor of the Exchequer and his colleagues arranged matters so that people wished to come as tourists instead of not wishing to come, then transport was prosperous. If those things were not happening, then transport was poor, and the matter could not be got over by some trick of organisation.

Mr. J. A. Sparks (Acton—Lab.) said the railwaymen, and the workers in other industries, were rapidly arriving at the conclusion that the time had come when their skill and energy should be devoted to the public welfare rather than to the private interests of a small section of the community.

The grouping of the railways into four main units had been an inevitable step in the evolution of our transport system, and the proposals of the Government at the present time were a logical consequence of that step.

Mr. Anthony Eden (Warwick & Leamington—C.) said there could be no measure which more closely affected the livelihood and future prospects of a great section of His Majesty's subjects. They were dealing in this Bill with a wide variety of problems which covered, for instance, municipalities and other local and public authorities, and an infinite number of individual livelihoods, to say nothing of their unparalleled complexity. Those factors made it indispensable that the Bill be taken on the floor of the House. There was no other way in which Parliament could fulfil its duty to the nation.

Examination of the Bill had aroused, even before the debate had opened, widespread anxiety in quarters which had never been regarded, since this Parliament had met, as hostile to the Government. Articles in such newspapers as *The Times*, the Government's staunchest supporter, the *Manchester Guardian*, the next most faithful, *The Economist*—none of those articles in those newspapers could be lightly set aside as either partisan, or as merely reactionary Tory prejudice.

The Commission's position seemed to be unsatisfactory. It was to be nominated by the Minister, but it did not nominate the executives, which were to act as its operative agents. There would be consultation, the Ministry said. No doubt, but the nomination of the executives rested with the Minister, as did the nomination of the Commission, and yet on the executives would fall the day-to-day responsibility for the execution of the policy over which the Commission was, apparently, to brood at leisure. Where was integration there? The real power would rest, apart from the Minister, with the executives and not with this Commission.

Question of Charging

If there was a single matter within the purview of the Bill which was of national interest for transport, it was, surely, the question of charging, and if there was a single matter in the set-up of the Bill which was essentially a matter for the Ministry, it was that question. Yet the Minister had no ideas in respect of charges, he said, and, despite his wide powers, he was going to remit all that to the Commission without first telling Parliament the Government's ideas. The House could not regard that as quite a satisfactory way to leave that most important part of the Transport Bill.

If the Government had not produced arguments to justify the Bill, it had certainly heaped plenty of abuse on our existing railway system. Had the immense contribution made by the railways towards winning the war already been forgotten?

It had been suggested that the railways were not in a position now to finance the necessary renewals. What were the facts? The arrears of maintenance on the railways were at present piling up, not because the railways had not got the money to pay for the renewals, but because they could not get the necessary materials sanctioned for their ordinary maintenance work. He did not say the Government was wrong not to give that sanction, but where it was wrong was in blaming the railways for not doing what they themselves were preventing them from doing.

Locomotive construction had been curtailed to enable more repairs to be carried out. But the construction of locomotives in outside workshops for export had been given priority over construction for the British railways. Again, he did not say that was wrong; it might be right. What

was wrong was to take no account of those factors when attacking the railways.

It was his conviction that the Bill, as at present drafted, if it should pass into law, would be nothing less than a major national disaster. If the Government was really determined to nationalise the railways, let it do it in a Bill which had a chance of working and not by one which had been riddled by every critic and every person who was not already in the Government lobby as an ardent supporter.

Mr. Herbert Morrison (Lord President of the Council) said it was curious that, although the Leader of the Opposition had got excited about the constitutional character of the Bill, no speaker from the Opposition Front Bench, or from anywhere else, as far as he knew, had attempted to show that the Bill dealt with fundamental constitutional issues.

British railways, management and men, had done a great job for the country in the war, and it was true that a good many of the railways' difficulties were due to wartime strain and the difficulties of replacement and repairs, inevitable at present. But, when all was said and done, a good deal of the British railway system had been really not very creditable before the war.

Few now advocated free-for-all competition in the world of transport. The tendency of legislation had been to eliminate the competition. It had started with the Railways Act, 1921, and continued in his own Road Traffic Act, 1930, which had imposed a licensing system of a national character on the buses, and that had been supported by all parties in the House. The real choice, therefore, was between State-regulated co-ordination or private quasi-monopolies, and an integrated national system.

The railways and the main road haulier interests were on the horns of a dilemma. Either they themselves proposed something which bordered on the nature of a monopoly, by the coming together of the two of them and the settling of standard conditions of road charges, or they still envisaged the wasteful forms of competition which, in the years between the wars, had been stifling the railways—and would in due time stifle an efficient road transport service as well. If the road and rail interests were to do a deal and divide the traffic between them, it was far better to bring all the main forms of organised transport under one control. If that was to be done, was there really any doubt who that one control and ownership would have to be? Surely, the nation? If, on the other hand, there was to be real competition between road and rail, then the Government and Parliament would find themselves with the railways, and possibly part of the road transport, on their hands in a sick condition.

There would be a splendid opportunity for the Commission to weld an efficient instrument to meet the transport needs of the country. It would have freedom to handle the physical assets of the industry —and that would be for the first time; because it was now between the separate ownerships, the numerous ownerships, of the various transport undertakings, there was not enough freedom to move, to adapt, to alter and replace the physical assets of transportation. The new concern would be free to go for sheer efficiency from the beginning, and to use assets in the best way. It would have at its disposal ample capital, at low cost and at low interest rates. They could use skilled minds in this vast industry to the best advantage; and they would enable a bold and considered programme of transport development to take place which would have been utterly impossible in the conditions of the transport industry between the wars.

Sir John Anderson had said: "Let each of these executives be separate, let each of them separately be answerable to the Minister, and let the Minister supervise them and arrange the necessary co-ordination between them." That seemed to be administratively bad, and placed far too much direct economic and managerial responsibility on the Minister. Moreover, it preserved the separate ownerships, the separate identities, of the railways, roads, docks, harbours, and so on. He believed that as long as they kept those separate ownerships, they were impeding the capacity for physical adaptation of the undertakings to give them the best possible public service, and that they must have a common ownership vested in one undertaking, before they would get the necessary freedom to make those concerns as efficient as they ought to be.

Then, in that case, the onus would be on the Minister himself to handle all those complex problems of so-called co-ordination, and that meant a high degree of political interference. He (Mr. Morrison) believed in political interference to the extent of holding and safeguarding the essentials of good public policy, but he believed that, in regard to the detailed management of an undertaking, the Minister and Members of Parliament had better be out of it.

Powers of Transport Commission

The British Transport Commission would own the whole of those undertakings. In addition, it would control the high finances of the combined undertakings. It would be the body to sanction capital expenditure, to deal with the essentials of high policy, the strategy, so to speak, of British transport, and to initiate and elaborate the issues of policy involved in the structure and actualities of rates, fares and charges. It seemed to him that was right, and that it would not be appropriate for the Minister to be driven to do all those things; nor did he think those things could be adequately done by each of the executives.

There would be the maximum practicable amount of devolution, first, to the executives, and, secondly, there should be the maximum degree of decentralisation within the administration itself. He hoped in due course—one could not be final—that they might evolve the possibility of a regional set-up, in which rail and road and other forms of transport would meet within the regions.

The exact form of administration and set-up for all time was not laid down in the Bill, and it had been complained that all those things ought to be set out in detail. He did not think that reasonable. Similarly, it was argued that they ought to provide for the rates and charges. It would be better for the Commission to elaborate its policy, and then have the obligation to take it to the transport licensing authority, where all the opponents, critics and parties could appear and the case be argued out, and the transport licensing authority give a fair decision on the facts.

The Bill was read a second time, and was committed to a standing committee.

COLLISION ON PENNSYLVANIA RAILROAD.—It is reported that at least 15 persons were killed and more than 50 injured when the Pennsylvania Railroad "Golden Arrow" express collided at Mansfield, Ohio, on December 13, with the wreckage of two goods trains which had come into collision a short time before.

The Transport Bill

The following letter from Sir Francis Joseph, who is a director of the L.M.S.R., and has many other commercial interests, was published in *The Times* of December 23:—

The speech of the Chancellor of the Exchequer on the second reading of the Transport Bill was worthy of his great reputation. His explanation of the financial provisions of the Bill in simple and concise language creates a spirit of envy in the minds of those who have to deal with financial problems.

But in the latter part of his speech he stated: "This railway system of ours is a very poor bag of physical assets." I beg to disagree with him. Throughout their existence railways have been handicapped by statutory obligations. Road competition became more intensive year by year and secured a greater proportion of the more profitable railborne traffic. Parliament denied any redress. The Government now says, in effect: "When we are owners we will neither endure nor tolerate such competition," but to imply that the failure to achieve a satisfactory agreement between road and rail is due to the railways is to ignore the facts.

In spite of this competition the railways spent millions of money every year, even during a period of acute industrial depression, in maintaining and improving their tracks and rolling stock. They also provided millions of pounds annually for capital expenditure.

It is true the stockholders have some grounds for claiming that their dividends were thereby adversely affected. And yet it was this policy which enabled the companies to place at the disposal of the nation a service which carried the armies and their equipment and munitions with such a measure of safety throughout the whole period of the war as proved the railways of Britain to be the safest in the world. If they were "a very poor bag of physical assets" it is reasonable to ask how they could have rendered these great services which are unquestioned. Yet it was done in spite of bomb, blitz, and blackout. The railways parted with locomotives and rolling stock to meet the vital needs of the services although urgently needed in their own systems. Most of this was lost oversea or has remained abroad since the war. The services rendered at the time of Dunkirk are surely something the railways can look back upon with pride? Many of the railway workshops were diverted to munitions during the war. It would be revealing if their costs were compared with factories presumed to be specially adapted for making similar goods.

That "the very poor bag of physical assets" has suffered from 1939 is true. Why? Staffs were recruited until the labour position was desperate; sleepers and rails were in such short supply that the pre-war standard of maintenance was impossible. Still, provision for replacements was made in the accounts. Even now the prospect for new rails in 1947 indicates further substantial cuts, while adequate supplies of sleepers are impossible. Today paint is not available to brighten up the stations, and even when a wagon is repaired it is denied a coat of paint to hide its defects. Yet these restrictions are imposed on the companies in such a way as suggests that "the laws of the Medes and Persians" still operate!

No one is more perturbed than the management and staff at their inability to bring things up to date and improve them. Schemes there are in plenty, but they must on the orders of a Ministry await "a more convenient season."

The acid tests of nationalisation will be: (1) Is it fair? (2) Will it work? Amalgamations sometimes kill the old team spirit which carried a business from small beginnings to great achievements. If nationalisation of transport will inspire the men to a greater sense of public service it will be a new and refreshing experience in the world. Whether the staff will welcome the change when it comes, who can say? As one who started his working life as a railway messenger it has been my privilege to enjoy the friendship of railway men of all grades for more than half a century. They are a grand body of men.

Surely it is a poor reward for them to know that the handicaps which compelled them to halt all schemes to improve their system have only earned for them the official verdict, "The railways are a disgrace to the country."

In *The Times* of December 28, the letter below, from Colonel Eric Gore Browne, Chairman of the Southern Railway Company, was published:—

I seek the courtesy of your columns to thank Sir Francis Joseph for his letter which you published in your issue of December 23.

This country owes more than it can ever repay to those men and women of all ranks who worked on and for the railways during the war just ended, and surely we owe a debt, too, to all those stockholders (the present owners of the railways) who, with good grace, accepted low or no dividends during the pre-war years. Their boards were thus enabled to keep their undertaking in a condition which, in spite of total war, never failed to deliver the goods.

But may I add to Sir Francis Joseph's "acid tests" of nationalisation? Is there any reason to think (1) that the public will have a better service? (2) That the public will have a cheaper service? (3) That the railway workers will be better off?

I wonder.

Railway Nationalisation and L.M.S.R. Staff

Sir William Wood, President of the Executive of the L.M.S.R., has addressed the following to L.M.S.R. officers and staff:—

"As you will be aware, the motion for the second reading of the Transport Bill was carried in the House of Commons by 362 votes against 205, and the Bill now goes to the Committee Stage, which will be taken after the Christmas recess. In the course of the debate, Mr. Hugh Dalton, speaking for the Government, stated:

"'The railways are a disgrace to the country.'

"The management wishes to assure you and all the officers and staffs in your department that, notwithstanding this statement, it has the highest confidence in the public work you are carrying out. It knows the difficulties of conditions at the present time, and there is no need to remind you that our troubles are due to causes outside the company's control and that everything possible is being done to obtain the Government assistance we need to put matters right and to prevent the situation getting any worse.

"No one in the L.M.S.R. service need be anything but proud of the company's record. The enclosed booklet ["A Record of Large-Scale Organisation and Management, 1923-1946," reviewed in an editorial article in *The Railway Gazette* of March 8, 1946] shows what we have accomplished and the methods we applied.

"The public are likely to have read the Chancellor's statement and some of them may be inclined to accept it as true. It is desirable, therefore, that as far as possible the matter should be explained to users of our services, and for this purpose supplies of the booklet are available if required."

NEW SURPLUS MACHINE TOOL DEPOTS.—A large selection of Government-owned general-purpose machine tools declared surplus will be available at two additional selling depots which the Ministry of Supply is opening at Stormy Down Airport, Pyle, near Bridgend, Glamorgan, on January 8, and at Madingley Road, Cambridge, on January 22. The machine tools will be available for inspection between 10 a.m. and 4 p.m. Mondays to Fridays.

Leopoldina Railway Co. Ltd.

The ordinary general meeting of the Leopoldina Railway Co. Ltd. was held on December 20 at River Plate House, London, E.C., Sir Henry Chapman, C.B.E., Deputy-Chairman, presiding.

The Secretary, Mr. I. H. G. Gilbert, read the notice convening the meeting and the report of the auditors.

The Deputy-Chairman, in moving the adoption of the report and accounts, said that he was presiding in the absence through illness of the Chairman, Mr. C. H. Pearson.

Referring to the accounts for the year 1945, he said that the net receipts from the operation of the railway in Brazil—£291,371—showed but a small improvement over those of the previous year. They were still, therefore, much below the sum required to meet the interest accrued during the year on the 4 per cent. debenture stock and 6½ per cent. debentures, together with the amount due under guarantee to the Leopoldina Terminal Company.

Taking these and other net revenue charges into account, the result of the year's working was a loss of £103,534. The position remained that the company has been incurring losses for the last 13 years amounting in the aggregate to over £2,400,000, and is still in moratorium.

Gross receipts from passengers, parcels, and goods traffic increased by £414,000, or 17 per cent., mainly as a consequence of the compensatory increase in tariffs authorised from June 1, 1945, although the volume of traffic handled improved by only a relatively small percentage—roughly 6 per cent. in the case of goods and parcels traffic; the passenger movement showing little variation. Owing principally to the lack of engines and rolling stock, due to the universal difficulty in obtaining replacements, the volume of traffic offering was considerably in excess of the capacity of the railway to handle, and in consequence priorities obliging concentration on the movement of particular traffics continued to operate throughout the year 1945.

Special Renewals Fund

Concurrently with the general tariff increase, and in addition to the improvements surcharge of 10 per cent. on tariffs, there was established during the year an additional surcharge of 10 per cent. to be applied entirely on renewals. The product of this surcharge for the period June to December, 1945, was £186,908; expenditure thereout during the same period amounted only to some £7,000. The existence of this special surcharge fund for renewals, which was at present accruing at the rate of some £350,000 a year, should, so far as could reasonably be foreseen, safeguard the company's renewals position.

Consequently, the board considered that there was no justification for providing out of the company's own resources anything more than the actual expenditure of £89,882, incurred on renewals, which for one reason or another could not properly be charged against the new renewals surcharge.

For these reasons, working expenses in 1945 benefited to the extent of some £90,000 as compared with 1944. Excluding this benefit, expenditure rose by £540,000 in 1945, of which the major portion—£450,000—was in respect of increased cost of wages and contributions to pension fund and similar charges.

Expenditure on fuel again rose, by approximately £100,000, or 14 per cent., the total fuel bill exceeding £700,000, which compared with a figure of some £210,000 in pre-war years. The higher price of wood fuel, which became each year more expensive and more difficult to obtain, was in large part responsible for this increase. The detrimental effect on the company's revenues of the enforced diversion of wagons to the collection and distribution of this fuel had been referred to on many occasions in the past, but it needed emphasis once again, at a time when the company's existing establishment of locomotives and rolling stock could not cope with the revenue-earning traffic offering by the public.

The Major Problem

So far as it was possible to see, there should be no lack of traffic offering; the difficulty was that they had not at present the means to carry it as promptly or in the volume that they should like—that was their major problem today. Material re-equipment must be a gradual process, at first perhaps, barely covering the further wastage of assets already overstrained, but gradually gaining momentum. A start had been made. After exercising every possible effort, the company obtained from America and placed in service eight locomotives in 1945, and in 1946 eight powerful Garratt locomotives from Great Britain, which were doing excellent work; in 1947 it was hoped that 17 more locomotives would follow, nine from this country and eight from America. Wagons had been delivered and others were on order; rails, locomotive spares, and sundry other materials required for the proper functioning of the transport system were gradually coming forward in appreciable quantity.

Advantage was taken of the recent presence in this country of the General Manager to discuss with him various matters that might require to be dealt with by the mixed commission suggested by the Brazilian Foreign Minister to take over and operate certain British interests, including the Leopoldina Railway. As yet, no news had been received as to the date on which the mixed commission would begin its deliberations; indeed, the company had not yet been asked to nominate its representatives. The board would take no major step in any direction without first obtaining the proprietors' assent and that of the other parties concerned.

The report and accounts were adopted unanimously.

MORE HOTELS JOIN TRAVEL ASSOCIATION.—The Travel Association of Great Britain and Ireland reports that 1,000 hotels throughout Great Britain became members of the association during 1946. This increase represents the first step in a post-war drive to broaden the association's field of activity in building up the tourist industry. Evidence of the acceptance of the fact that a flourishing tourist industry can contribute in a large measure to the prosperity of the country is provided by the constantly increasing membership of the association, and the variety of interests now represented. These include railway and shipping companies, air lines, hotels, banks, local authorities, industrial undertakings, labour organisations, cultural institutions, the entertainment industry generally, and, in fact, every aspect of trade and industry.

Notes and News

International Transportworkers' Federation.—The head office of the International Transportworkers' Federation has moved, as from December 25, 1946, to Maritime House, Old Town, Clapham, London, S.W.4. (Tel. Macaulay 2032).

Civil Engineering Draughtsman Required.—A draughtsman is required for the civil engineering department of the Nigerian Government Railway, for a tour of 18 to 24 months with prospect of permanency. See Official Notices on page 31.

Superintendent of Works Required.—A superintendent of works, age 25-35 years, is required by the Sudan Railways for service in the Sudan, to supervise the construction and maintenance of harbour works and buildings, preparation of estimates, and similar work. See Official Notices on page 31.

Architectural Draughtsman Required.—An architectural draughtsman is required by the Nigerian Government Railway for a tour of 18 to 24 months, with prospect of permanency. Candidates must have had a thorough training and should preferably be registered as an architect. See Official Notices on page 31.

Administrative Assistant Required.—An administrative assistant, Grade II, is required by the Government of Nigeria for the railway department for one tour of 18 to 24 months, with possible permanency. Candidates, not over 35, must have matriculated, and should preferably hold a B.Com. or B.Sc.(Econ.) degree or have followed a course of study for associated membership of a recognised secretarial body. See Official Notices on page 31.

Green Howards Crests for L.M.S.R. Locomotive.—General Sir Harold E. Franklyn, Colonel of the Green Howards, on December 13 unveiled crests of the regiment on an L.M.S.R. "Royal Scot" class locomotive. The crests are the gift of Sir Robert Ropner, whose son-in-law, Lt.-Colonel C. M. Hull, M.C., was second in command of the 6th Battalion, The Green Howards, on D-Day, and is now one of three British officers, selected from 3,000 candidates, serving on the staff of General McArthur in Japan. Mr. R. A. Riddles, a Vice-President of the L.M.S.R., presided at the ceremony, which took place at Leeds City Station, and after the unveiling, Sir Robert Ropner drove the engine on a short run.

Motor Vehicles (Construction & Use).—The Minister of Transport on December 13, 1946, made the Motor Vehicles (Construction & Use) (Amendment) (No. 5) Regulations, 1946. The Minister, on December 13, also made the Motor Vehicles (Construction & Use) (Track Laying Vehicles) (Amendment) (No. 2) Regulations, 1946.

First Post-War Czechoslovak Express Locomotive.—The first of a series of 40 express locomotives under construction for service on the Czechoslovak State Railways left the Skoda Works on December 19. This was the first express locomotive built in Czechoslovakia since the war. The new series of engines is designed for a maximum speed in normal traffic of 75 m.p.h.

"Go Slow" Movement at Stratford, L.N.E.R.—As a result of the continuance of working to rule by mechanics and fitters at the L.N.E.R. Stratford locomotive depot (see our December 20 issue), the L.N.E.R. announced on December 19 that shortage of locomotive power had necessitated cancellation of 12 trains on the Hertford, Enfield, Woodford, and Cheshunt lines into Liverpool Street and Fenchurch Street. The movement began on December 11, after a request for bonus payment had not been conceded.

Supply of Wagons at Avonmouth.—A B.B.C. broadcast on December 2, 1946, claimed that the unloading of turkeys from a ship at Avonmouth Docks had been suspended over the week-end by a shortage of insulated railway vehicles. The suggestion was misleading, for we are informed that on Saturday morning, December 21, there were 331 insulated railway wagons standing at Avonmouth. Requisitions for a further 20 wagons were received on the same day; for 70 on Sunday, December 22; and for 60 on Monday, December 23; the whole of which were supplied. Yet only 64 wagons were loaded during the week-end, and well over 300 were still standing idle on Monday, December 31. Moreover, ample road transport was available, but was not called upon to render assistance.

Derailment at Durnsford Road, Southern Railway.—Two coaches of an empty train coming out of the siding at Durnsford Road depot, near Wimbledon, Southern Railway, were derailed on the

Green Howards Crests for L.M.S.R. Locomotive

General Sir Harold E. Franklyn, Colonel of the Green Howards, accompanied by Mr. R. A. Riddles, a Vice-President of the L.M.S.R., unveils the regimental crests on a "Royal Scot" class locomotive at Leeds City Station (see news paragraph above)

British and Irish Railway Stocks and Shares

Stocks	Highest 1946	Lowest 1946	Prices Dec. 31, 1946	Prices Rise/Fall
G.W.R.				
Cons. Ord.	61¼	54¼	58	+ ¼
5% Con. Pref. ...	126½	107	124½	+ 2
5% Red. Pref. (1950)	106½	102½	104½	+ 2
5% Rt. Charge ...	140½	122½	135½	—
5% Cons Guar. ...	137½	118½	134½	+ 1
4% Deb.	129½	106	125½xd	—
4½% Deb.	129½	107	125½xd	—
4½% Deb.	130½	114	126½xd	—
5% Deb.	142½	125	137½xd	+ 1
2½% Deb.	95½	81½	92½xd	+ ½
L.M.S.R.				
Ord.	30½	26½	30½	+ ¼
4% Pref. (1923) ...	64	52½	62½	+ 2
4% Pref.	86	75½	83½	+ 1
5% Red. Pref. (1955)	105½	97	100½	—
4% Guar.	108½	100	105½	+ 1
4% Deb.	120	103	115½	+ 2
5% Red. Deb. (1952)	108½	105½	105½	+ 1
L.N.E.R.				
5% Pref. Ord. ...	7	5	6⅞	—
Def. Ord.	3½	2¼	3⅜	—
4% First Pref. ...	59½	50½	57½	+ 1
4% Second Pref. ...	29½	25¼	29½	+ ½
5% Red. Pref. (1955)	104	97	100½	—
4% First Guar. ...	107	98	104½	+ 1
4% Second Guar. ...	101	90	98½	+ 1
3% Deb.	104	87½	100	+ 1
4% Deb.	119½	102½	115½	+ 2
5% Red. Deb. (1947)	101	99	99½	+ ½
4½% Sinking Fund Red. Deb. ...	107½	101½	102½	+ 1
SOUTHERN				
Pref. Ord.	79½	70	76½	+ 1
Def. Ord.	24	19½	24	+ ½
5% Pref.	125½	107	123½	+ 2
5% Red. Pref. (1964)	115½	106½	112½	+ 1
5% Guar. Pref. ...	137½	119	134½	+ 1
5% Red. Guar. Pref. (1957)	115½	107½	112½	+ 2
4% Deb.	129½	105½	125½	+ 2
5% Deb.	159½	125½	136½	+ 3
4% Red. Deb. (1962-67)	113½	104½	109½	+ 1
4% Red. Deb. (1970-80)	115½	104½	111½	+ 1
FORTH BRIDGE				
4% Deb.	109	103	104½	—
4% Guar.	105	102	101	+ 1
L.P.T.B.				
4½ "A"	133½	120½	129½	+ 2
5% "A"	142½	130½	138½	+ 2
3% Guar. (1967-72)...	108	98½	105½	+ ½
5% "B"	128½	117½	124½	+ 1½
"C"	64½	56½	65½	+ 1
MERSEY				
Ord.	34	30	34	—
3% Perp. Pref. ...	76	69	73½	—
4% Perp. Deb. ...	117½	103	112	+ 1
3% Perp. Deb. ...	98	81	93½	+ 1
IRELAND*				
BELFAST & C.D.				
Ord.	8½	6	7½	—
G. NORTHERN				
Ord.	41⅞	31½	39	— ½
Pref.	63⅝	52	62	—
Guar.	97½	78½	97	— ½
Deb.	107	97½	107	—
IRISH TRANSPORT				
Common	19/2½	16/9	18/7½	1½
3% Deb.	107	100	105½	+ 1

* Latest available quotation

OFFICIAL NOTICES

Sudan Government

SUDAN RAILWAYS require a Superintendent of Works, age 25-35 years, for service in the Sudan to supervise the construction and maintenance of harbour works and buildings, preparation of estimates and similar work. Inspectional diving to a depth of 40 ft. in tideless water from time to time. Applicants must have had good training and experience in harbour construction and/or maintenance work or in heavy civil engineering construction work; they must have had diving experience or, failing that, be willing to dive.

The salary scale of post is £E.300-324-360-396-432-480-540-600 (all biennial increases)-660 maximum (triennial increases), if efficiency bar not passed after reaching £E.480. If efficiency bar passed, scale extended after £E.600 by two biennial and one triennial increases of £E.60 to £E.780 maximum. There is no Income Tax payable at present in the Sudan. Free passage on appointment and strict medical examination. (Note: £E.1 = £1 0s. 6d.).

Appointment on probation for permanent pensionable service at a starting salary according to age, experience and qualifications, or, alternatively, on provident fund contract with minimum of seven years' service at about 17 per cent. higher salary. Outfit allowance at the rate of £E.40 is payable on appointment provided starting salary is less than £E.600 per annum. Cost-of-living allowance at the rate of 35 per cent. of salary, subject to a maximum of £E.15 per month is now payable. Papers containing fuller information to candidates are obtainable from the Sudan Agent in London, Wellington House, Buckingham Gate, London, S.W.1. Mark envelopes "Superintendent of Works."

BRITISH Railway Company operating in South America has vacancy for a Draughtsman with railway experience. Preferably single man, age 25/30. Commencing salary £600 per annum. Passage paid and free quarters provided. Write with full details of qualifications and experience to Box 1461, c/o CHARLES BARKER & SONS LTD., 31, Budge Row, London, E.C.4.

Crown Agents for the Colonies

APPLICATIONS from qualified candidates are invited for the following posts:—

DRAUGHTSMEN (as under):—

Required by the Nigerian Government Railway Civil Engineering Department for a tour of 18 to 24 months with prospect of permanency. Salary according to experience, age and war service in the scale £400, rising to £720, a year plus local allowance, which on a salary of £400 amounts to £60 a year and for married men a separation allowance of between £84 and £204 a year, according to number of dependants. Outfit allowance £60. Free passages and quarters.

DRAUGHTSMAN (Civil Engineering):—Candidates must have had a good general and technical education and have had at least five years' experience in the drawing office, preferably of a Civil Engineering Railway Department or a firm of Consulting Engineers or Contractors, with practice in railway work. A knowledge of the design and construction details of civil engineering structures and railway trackwork will be required, including the ability to take off quantities, prepare estimates and draft general specifications.

DRAUGHTSMAN (Architectural):—Candidates must have had a thorough training and should preferably be registered as an architect. They should be experienced in the preparation of sketch plans, working drawings and details and in the preparation of bills of quantities and specifications, for general industrial work and housing. A sound knowledge of building construction, sanitation and simple reinforced concrete work, together with ability to direct and instruct junior assistant, is necessary.

Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the CROWN AGENTS FOR THE COLONIES, 4, Millbank, London, S.W.1, quoting M/N/17417 on both letter and envelope.

Crown Agents for the Colonies

APPLICATIONS from qualified candidates are invited for the following post:—

ADMINISTRATIVE ASSISTANT, Grade II, required by the Government of Nigeria for the Railway Department for one tour of 18 to 24 months, with possible permanency. Salary £400, rising to £720 a year. Commencing salary according to qualifications, experience and war service. On salary of £400 a year local allowance is £60 and separation allowance for married men is between £84 and £204 a year, according to dependants. Outfit allowance £60. Free passages and quarters. Candidates, not over 35, must have matriculated and should preferably hold a B.Com. or B.Sc.(Econ.) degree or have followed a course of study for Association membership of a recognised secretarial body. Essential qualifications are tact, patience and the ability to express matters briefly and clearly in correspondence. Experience in dealing with staff and establishment matters would be an advantage. Apply at once by letter, stating age, whether married or single, and full particulars of qualifications and experience, and mentioning this paper, to the CROWN AGENTS FOR THE COLONIES, 4, Millbank, London, S.W.1, quoting M/N/16784 on both letter and envelope.

CIVIL ENGINEER, B.Sc., Assoc.M.Inst.C.E., also with engineering qualifications, recognised by Brazilian Government, fifteen years' residence in Brazil and formerly general manager of Railway there, now nationalised and with good connections in country, returning to Brazil after military service, desires to open agencies Rio and Sao Paulo to represent British firms. Enquiries solicited.—Box PP35, W. H. SMITH & SON LTD., Manchester, 3.

SECTIONED PERSPECTIVE VIEW OF LOCOMOTIVE FRONT END. A notable drawing of L.M.S.R. class "7P" 4-6-2 locomotive of the latest type. Reprinted from *The Railway Gazette*, June 15, 1945. *Price* 2*s.* 6*d. Post free* 2*s.* 8*d.*

evening of December 18. The carriages fouled the up main line, and, as a result, through traffic had to be diverted to the local line; certain trains, also, were diverted through East Putney. Normal running was resumed on the morning of December 19.

Railway Staffs' War Advance.—An agreement was reached on December 23 between the four main-line railway companies and the three railway trade unions for the consolidation of the special war wage advance into basic wage rates. The war wage advance of the weekly wage staff, which is 28s. a week, is to be consolidated into the basic rate, instead of only 20s. of it as previously offered by the companies and rejected by the unions. In the case of clerical and supervisory staffs earning up to £1,500 a year, the £73 a year war bonus similarly will be added to the salary scales.

Fuel Oil Storage at Barry Docks.—With the docking at Barry of the oil tanker *Murena*, carrying 11,708 tons of fuel oil, on December 4, 1946, a new business venture at Barry Docks came into being. In 1940, a tank farm on a site near the Mole at No. 1 Dock was erected at the instance of the Ministry of Food for the reception of edible oils to be used for the manufacture of margarine at a plant erected at Merthyr. The wartime need for this plant being now concluded, negotiations have been proceeding between Cory Bros & Co. Ltd. and the Government Department concerned, as a result of which the firm has secured a long lease of the tank farm. It is intended to develop the site as a depot for the bunkering of oil-burning and diesel vessels calling at the South Wales ports, and for the distribution of oil coastwise by the use of small tankers. The firm hopes to have available at an early date two barges suitable for this purpose, and thus general cargo ships loading at Cardiff or Newport will be able to bunker simultaneously with their loading or discharging operations. The tank farm comprises eleven tanks with a total storage capacity of 58,000 tons, and it is hoped to increase this capacity to not less than 100,000 tons at a comparatively early date.

L.M.S.R. Orders for Motor Vehicles.—Orders totalling more than £630,000 are being placed by the L.M.S.R. with the British motor industry under a programme for the provision during 1947 of 940 new road vehicles and 625 trailers. The programme includes over 500 "mechanical horse" tractors, 300 goods and parcels vehicles, and 100 service cars. More than 200 of the new vehicles will replace horse-drawn transport; the remainder will augment the L.M.S.R. road motor fleet for the development of peacetime traffic, and to make good arrears caused by the war.

Christmas Tree Display at York, L.N.E.R.

Mr. S. T. Burgoyne, Passenger Manager, North-Eastern Area, L.N.E.R., inviting the Lord Mayor of York (Alderman F. Gaines) to open the Christmas tree display at York Station, L.N.E.R., on December 14

Forthcoming Meetings

January 7 (*Tue.*).—The Institution of Railway Signal Engineers, at the Institution of Electrical Engineers, Savoy Place, Victoria Embankment, W.C.2. 6 p.m. "Electrical Power Supplies for Railway Signalling," by Mr. L. R. Insley.

January 9 (*Thu.*).—The Southern Railway Lecture & Debating Society, Chapter House, St. Thomas' Street, E.C.1. 5.45 p.m. "Passenger Train Services of the Future," by Mr. C. E. R. Sherrington, Secretary, Railway Research Service."

January 15 (*Wed.*).—The Institution of Locomotive Engineers, in the Hall of the Institution of Mechanical Engineers, Storey's Gate, London, S.W.1. 5.30 p.m. "Organisation and Carrying Out of Examinations and Repairs of Locomotives at Running Sheds in Relationship to Locomotive Performance and Availability," by Lt.-Colonel Harold Rudgard, O.B.E. (Member of Council).

Railway Stock Market

Stock markets began the New Year with a firm trend under the lead of British Funds, which strengthened in anticipation of the closing of the "tap" issue of 2½ per cent. Treasury stock and the re-investment of cash repayments in respect of Local Loans. Although the fuel situation has a restraining influence, and textile shares eased, buying interest again predominated in the industrial sections. Yield considerations further drew attention to iron and steels, United Steel, Dorman Long, Whitehead Iron and Stewarts and Lloyds all moving higher on balance.

There was a tendency to favour shares of companies likely to benefit considerably from the abolition of E.P.T., the assumption being that the latter will not be replaced by a new scheme of dividend limitation. It is recognised, however, that it is likely to be stipulated that sums which would otherwise have gone in E.P.T. will have to be placed to plant and equipment reserves, and will therefore not be available for dividend payments.

Home rails continued to strengthen, the prior charge and senior preference stocks being favoured as undervalued, and prices have approximated more to the "take-over" levels. Junior stocks were also in better request, because current prices can be regarded as carrying the final dividend payments for 1946.

It is expected that the dividend announcements will be made on the following dates: L.M.S.R., February 7; Southern, February 13; Great Western, February 14; and L.N.E.R., February 21.

Incidentally, the payment made by Cable & Wireless (the operating company) just before Wednesday last, when the business was transferred to State ownership, tended to have a beneficial influence on the nationalisation groups generally. The steady improvement in shares of electricity supply companies, however, was due mainly to the assumption that in this case nationalisation compensation will not be on the unjust basis for which railway stockholders have been singled out, namely, market prices, with no appeal against the terms stipulated by the Government.

Indications are that railway stockholders are realising more fully not only the big cut in income that they will suffer, but also the unfairness of the terms in comparison with those in respect of other industries singled out for nationalisation. In the case of the Cable & Wireless Act, there is specified provision for arbitration, and as agreement regarding compensation has not been reached, the latter is to be decided by an independent tribunal. This will be under the chairmanship of a Lord of Appeal in Ordinary, or a Supreme Court judge, and will include an accountant nominated by the Institute of Chartered Accountants and a business or financial expert proposed by the Governor of the Bank of England. The tribunal will have to decide the amount which the business might realise on the basis of net maintainable revenue, etc. Shareholders in Cable & Wireless (Holding) and those in colliery and other companies in the nationalisation net cannot complain that careful provision has not been made to arrive at a fair basis of compensation.

The one exception is provided by the home railways, whose terms have been fixed by the Government, and against which there is no appeal. The only conclusion is that the Government decided against an independent tribunal in the case of the railways because it inevitably would give a compensation well above that proposed by the Transport Bill. When the latter reaches the standing committee after the reassembly of Parliament, it may well be that various of the Bill's proposals and ambiguities will be ironed out; but it would be optimistic to hope for any major amendments in view of the attitude so far adopted by the Government.

Owing to the clauses of the Bill dealing with dividend payments, there is some uncertainty in the City when the home railway final dividends for 1946 actually will be payable, and doubts prevail whether in all cases the total payments will equal those for 1945, when there were minor withdrawals from reserves. London Transport stocks have participated in the better trend in home railway prior charges; the 4½ per cent. "A" stock is 130, which, however, compares with the "take-over" price of 133 3/16, and the 5 per cent. "A" is 139½. Take-over price for the latter is 142 3/16.

Argentine rails, after uncertainty and a moderate decline, have tended to rally on more hopeful assumptions as to the outcome of the Buenos Aires negotiations. If agreement were reached on the basis of at least £125 millions of capital for the new Argentine company, it is felt in the City that stockholders would receive reasonable terms, but the position is too complicated for assumptions to be made, and official news from Argentina must be awaited. In other directions, San Paulo at 138 continued to reflect "break-up" estimates, and further gains were recorded in Canadian Pacific preference and debenture stocks.

Traffic Table and Stock Prices of Overseas and Foreign Railways

	Railways	Miles open	Week ended	Traffic for week: Total this year	Traffic for week: Inc. or dec. compared with 1944/5	No. of Week	Aggregate traffics to date: Totals 1946/7	Aggregate traffics to date: Totals 1945/6	Aggregate traffics to date: Increase or decrease	Shares or Stock	Prices: Highest 1945	Prices: Lowest 1945	Prices: December 31, 1946
South & Central America	Antofagasta	834	22.12.46	£ 49,220	+ £ 7,540	51	£ 1,747,370	£ 1,530,720	+ £ 216,650	Ord. Stk.	12	8¾	10
	Arg. N.E.	753	21.12.46	ps.311,900	+ps.27,900	25	ps.7,922,200	ps.7,549,500	+ ps. 372,700	,,	10	5¾	14½
	Bolivar	174	Nov., 1946	4,679	— 27	48	47,631	53,283	— 5,652	6 p.c. Deb.	8½	5½	6½
	Brazil	—	—	—	—	—	—	—	—	Bonds	25	17	26
	B.A. Pacific	2,771	21.12.46	ps.2,425,000	—ps.107,000	25	ps.56,265,000	—	—	Ord. Stk.	7	5	6¾
	B.A.G.S.	5,080	21.12.46	ps.3,951,000	—ps.171,000	25	ps.83,083,000	ps.79,492,000	+ ps.3,591,000	Ord. Stk.	13¾	10½	12½
	B.A. Western	1,924	21.12.46	ps.1,318,000	+ ps.38,000	25	ps.30,708 000	ps.29,329,000	+ ps.1,379,000	,,	12¾	9½	14½
	Cent. Argentine	3,700	21.12.46	ps.3,311,340	+ps.174,040	25	ps.78,589 497	ps.75,936,400	+ ps.2,653,097	,,	9¾	7	9
	Do.	—	—	—	—	—	—	—	—	Dfd.	5	2¾	5
	Cent. Uruguay	970	21.12.46	35,200	— 10,761	25	912,904	925,273	— 12,369	Ord. Stk.	7½	4	9
	Costa Rica	262	Aug., 1946	36,220	+ 4,160	9	73,313	63,153	+ 10,160	Stk.	16½	13	9
	Dorada	70	Nov., 1946	27,600	— 1,354	48	337,575	330,489	+ 7,086	1 Mt. Deb.	103	102	100½
	Entre Rios	808	21.12.46	ps.471,600	+ps.51,300	25	ps.10,589,700	ps.10,516,300	+ ps. 173,400	Ord. Stk.	7½	4½	6½
	G.W. of Brazil	1,030	21.12.46	50,400	+ 16,200	51	1,547,300	1,328,800	+ 218,500	Ord. Stk.	30/-	23/6	20/-
	Inter. Ctl. Amer.	794	Nov., 1946	$833,362	+$197,150	48	$9,543,915	$8,130,214	+ $1,413,701	—	—	—	—
	La Guaira	22¾	Nov., 1946	6,162	— 255	48	62,803	68,797	— 5,994	5 p.c. Deb.	78	70	65
	Leopoldina	1,918	21.12.46	73,167	+ 4,298	51	3,143,673	2,758,256	+ 385,417	Ord. Stk.	4½	3½	3½
	Mexican	483	31.5.46	ps.1,464,000	+ps.459,100	22	ps. 7,706,200	ps.13,441,600	+ ps.5,220,200	Ord. Stk.	¼	¼	¼
	Midland Uruguay	319	Nov., 1946	14,510	— 5,278	22	94,676	94,801	— 125	—	—	—	—
	Nitrate	382	15.12.46	6,958	— 1,089	50	201,977	181,726	+ 20,251	Ord. Sh.	75/6	67/6	73/9
	N.W. of Uruguay	113	Nov., 1946	5,098	— 662	22	27,692	29,151	— 1,459	—	—	—	—
	Paraguay Cent.	274	20.12.46	$71,803	— $17,573	25	£1,563,024	£1,536,211	+ £26,813	Pr.Li.Stk.	79⅞	77	50
	Peru Corp.	1,059	Nov 1946	143,342	+ 4,003	22	773,049	704,271	+ 68,778	Pref.	10⅜	7⅛	8½
	Salvador	100	Aug., 1946	c108,000	+ c14,000	9	c190,000	c189,000	+ c1,000	—	—	—	—
	San Paulo	153¼	—	—	—	—	—	—	—	Ord. Stk.	60¾	50½	138½
	Taltal	156	Nov., 1946	5,575	+ 2,945	22	25,730	12,320	+ 13,410	Ord. Sh.	17/-	10/6	20/-
	United of Havana	1,301	21.12.46	50,585	— 2,905	25	1,229,396	1,156,509	+ 72,887	Ord. Stk.	3	1	1¾
	Uruguay Northern	73	Nov., 1946	1,386	— 331	22	6,596	9,065	— 2,469	—	—	—	—
Canada	Canadian National	23,482	Nov., 1946	9,282,000	+ 705,500	48	91,193,750	99,564,250	— 8,370,500	—	—	—	—
	Canadian Pacific	17,037	21.12.46	1,485,000	+ 50,000	51	71,218,000	77,118,000	— 5,900,000	Ord. Stk.	24	14⅜	18½
Various	Barsi Light†	202	Oct., 1946	17,887	— 2,415	30	162,315	151,567	+ 10,748	Ord. Stk.	131	123	112½
	Beira	204	Sept., 1946	90,848	+ 17,136	52	950,694	920,575	+ 30,119	—	—	—	—
	Egyptian Delta	607	20.11.46	22,364	+ 1,598	33	419,149	395,701	+ 23,448	Prf. Sh.	10	8½	6
	Manila	—	—	—	—	—	—	—	—	B. Deb.	71	55½	68½
	Mid. of W. Australia	277	Oct., 1946	20,833	+ 1,284	17	69,457	64,837	+ 4,620	Inc. Deb.	97½	85	70
	Nigeria	1,900	Oct., 1946	328,866	+ 30,729	30	2,594,380	1,607,174	+ 987,206	—	—	—	—
	Rhodesia	2,445	Sept., 1946	541,147	+ 24,052	52	6,174,663	6,069,663	+ 105,000	—	—	—	—
	South African	13,323	30.11.46	1,251,934	+ 159,203	34	39,933,637	35,322,923	+ 4,610,714	—	—	—	—
	Victoria	4,774	June, 1946	1,196,661	— 23,996	—	—	—	—	—	—	—	—

† Receipts are calculated @ 1s. 6d. to the rupee